

ENVIRONMENTAL CONSEQUENCES



INTRODUCTION

The National Environmental Policy Act (NEPA) requires that environmental documents discuss the environmental impacts of a proposed federal action, feasible alternatives to that action, and any adverse environmental effects that cannot be avoided if a proposed action is implemented. In this case the proposed federal action would be the adoption of a general management plan (GMP) for the Tuskegee Airmen NHS. This chapter analyzes the environmental impacts of implementing the five alternatives on cultural resources, natural resources, the visitor experience, and the socioeconomic environment. The analysis is the basis for comparing the beneficial and adverse effects of implementing the alternatives.

Because of the general, conceptual nature of the actions described in the alternatives, the impacts of these actions are analyzed in general qualitative terms. Thus, this environmental impact statement should be considered a programmatic analysis. If and when site-specific developments or other actions are proposed for implementation subsequent to this GMP, appropriate detailed environmental and cultural compliance documentation will be prepared in accord with the NEPA and National Historic Preservation Act requirements.

Impact analysis discussions are organized by impact topic and then by alternative under each topic. Each alternative discussion also describes cumulative impacts and presents a conclusion. At the end of the chapter there is a brief discussion of unavoidable adverse

impacts, irreversible and irretrievable commitments of resources, and the relationship of short-term uses of the environment and the maintenance and enhancement of long-term productivity.

CUMULATIVE IMPACT ANALYSIS

A cumulative impact is described in the Council on Environmental Quality's regulation 1508.7 as follows:

Cumulative impacts are incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

To determine potential cumulative impacts, other projects within and surrounding the Tuskegee Airmen NHS were identified. The area included surrounding communities. Projects were identified by discussions with the NPS staff and representatives of county and town governments. Potential projects identified as cumulative actions included any planning or development activity that was currently being implemented, or would be implemented in the reasonably foreseeable future. Impacts of past actions were also considered in the analysis.

These actions are evaluated in conjunction with the impacts of each alternative to determine if

they would have any cumulative effects on a particular natural, cultural, or socioeconomic resource or visitor use. If the cumulative action is still in the early planning stages, the qualitative evaluation of cumulative impacts was based on a general description of the project.

Past Actions

The Tuskegee Airmen facilities were originally constructed on 781 acres of land purchased from a local farmer. The Tuskegee Institute was contracted by the U.S. Army to construct the airfield and establish the flight school. In 1945, the Army Air Corps school at Moton Field closed and the land was used by the Tuskegee Institute for private flying lessons and private aircraft storage. The Skyway Club at Moton Field was used as a nightclub for a period after the war and was later converted to overflow housing for students at the Tuskegee Institute. Little maintenance and upkeep was completed at Moton Field after World War II and many of the facilities deteriorated. During the 1950s, a golf course was developed at Moton Field for Tuskegee Institute faculty and those employed at the Veterans hospital. The Tuskegee Institute's School of Veterinary Medicine used Moton Field for animal research in the 1960s and 1970s. In 1972, 325 acres of Moton Field were transferred to the City of Tuskegee for the development of a municipal airport, which is currently in operation. During 1998, Public Law 105-355 established the Tuskegee Airmen NHS and the NPS acquired 44 acres of land from Tuskegee University and the City of Tuskegee to

establish the historic site (Pond and Company 2002).

The NPS has completed Phase 1 and Phase 2 of the preservation and rehabilitation of the Tuskegee Airmen NHS. Construction associated with Phase 1 included the restoration and rehabilitation of Hanger #1, restoration of historic landscape and furnishings, restoration of the exterior of the control tower, rehabilitation of warehouse/vehicle storage, rehabilitation of the bath and locker building for administrative use, installation of drainage and stormwater retention structures, and the construction of some parking areas and grading of the remaining parking areas. Phase 2 included construction of a picnic area, construction of a service entrance, reconstruction of Hanger #2 and build out of the main hanger area for exhibits, restoration of the interior of the control tower, restoration of the tarmac, construction of bus parking, and construction of a portion of the automobile parking area.

The Federal Aviation Administration (FAA) approved an Airport Improvement Plan grant for \$100,000 for Moton Field Municipal Airport that was recently used to install navigational aids, prepare environmental studies, and to complete an update to the Airport Master Plan Study (FAA 2003).

The Alabama Statewide Airport System Plan is a component of the first phase of a comprehensive study being conducted by Alabama DOT Aeronautics Bureau. The second phase of planning will involve development of capital improvement plans (CIPs) to prioritize improvements needed at

each airport in Alabama, including Moton Field Municipal Airport. The city of Tuskegee received a \$5,556 grant from Alabama DOT in fiscal year (FY) 2003, as part of a \$1.5 million distribution over 44 airports statewide (Alabama DOT Aeronautics Bureau 2003).

Present Actions

Construction of a separate entrance road to Moton Field Municipal Airport is in the process of being constructed by the City of Tuskegee.

Future Actions

Phase 3 of the preservation and rehabilitation of the Tuskegee Airmen NHS has not yet been funded. Actions that would be completed as part of this phase include restoration of the tennis court surface, construction of a ghost structure (physical plant warehouse), and construction of some parking and pedestrian walkways.

The Tuskegee Airmen National Center (TANC) would provide the story of the Tuskegee Airmen, emphasizing the past, present, and future of military aviation and training. The TANC would include a full-scale military museum, major exhibits with period military aircraft and equipment similar to those used by the Tuskegee Airmen in World War II, and an audiovisual presentation and interactive exhibits and programs. The Center would also contain the Charles Alfred Anderson Department of Aviation Science and would eventually contain visitor contact information and orientation for the entire site, with a Tuskegee Airmen Memorial in the form of a Wall of Honor that would include a list of the names of all Tuskegee

Airmen as well as a statue of "Chief" Anderson.

The TANC would be located close to the principal welcome and orientation areas and the Tuskegee Airmen Memorial. The site can accommodate the Airfield Operations component of Tuskegee University. If Tuskegee University elects to locate this component on the site, it would be separated visually and physically from the Historic Core Area so as to not interfere with the visitor understanding of this historic component of the site. Vehicle access and parking can be an extension of the primary public access system instituted by the NPS, with service access available from the southeast (Hartrampf 2004).

Proposed improvements to Moton Field Municipal Airport include extending the runway from 5000 feet (ft) to 6500 ft, installation of navigational aids and performing various studies. The proposal for the runway improvements and extension has been submitted and approved by FAA; however, funds have not been allocated.

There are no transportation projects scheduled by Alabama DOT in the vicinity of the Tuskegee Airmen NHS within the next five years that would cumulatively add to the impacts of the alternatives implemented. However, I-85 improvements are planned in the long-term to provide a new access route to the park, or improve existing routes, to ease traffic congestion that may result from increased park visitation.

IMPAIRMENT OF NATIONAL HISTORIC SITE RESOURCES

In addition to determining the environmental consequences of implementing the preferred and other alternatives, NPS Management Policies 2006 requires analysis of potential effects to determine whether or not proposed actions would impair national historic site resources and values.

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park system resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on a park unit's resources and values. However, the laws do give the NPS the management discretion to allow impacts on park unit resources and values when necessary and appropriate to fulfill the purposes of the park unit, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within a park unit, that discretion is limited by the statutory requirement that the NPS must leave resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of the park unit's resources and values, including the opportunities that otherwise would

be present for the enjoyment of those resources or values (NPS Management Policies 2006). An impact on any park unit's resource or value may constitute impairment. An impact would be more likely to constitute impairment to the extent it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park unit;
- key to the natural or cultural integrity of the park unit or to opportunities for enjoyment of the park unit; or
- identified as a goal in the park unit's GMP or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park unit, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park unit. A determination on impairment is made in the conclusion section in this document for each impact topic related to the national historic site resources and values. An evaluation of impairment is not required for topics related to visitor use and experience (unless the impact is resource based), NPS operations, or the socioeconomic environment. When it is determined that an action(s) would have a moderate to major adverse effect, a justification for "nonimpairment" is made. Impacts of only negligible or minor intensity are not considered to result in impairment.

METHODS AND ASSUMPTIONS FOR ANALYZING IMPACTS

The planning team based the impact analysis and the conclusions in this chapter largely on the review of existing literature and studies, information provided by experts in the NPS and other agencies and national historic site staff insights and professional judgment. The team's method of analyzing impacts is further explained below. It is important to remember that all the impacts have been assessed assuming that mitigation measures would be implemented to minimize or avoid impacts. If mitigation measures described in the "Alternatives Including the Preferred Alternative" chapter were not applied, the potential for resource impacts and the magnitude of those impacts would increase.

Director's Order 12, "Conservation Planning, Environmental Impact Analysis, and Decision Making," presents an approach to identifying the duration (short or

long term), type (adverse or beneficial), and intensity or magnitude (e.g., negligible, minor, moderate, or major) of the impact(s), and that approach has been used in this document. Direct and indirect effects caused by an action were considered in the analysis. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later in time or farther removed from the place, but are still reasonably foreseeable.

The impacts of the action alternatives describe the difference between implementing the no-action alternative and implementing each of the action alternatives. To understand a complete "picture" of the impacts of implementing any of the action alternatives, the reader must also take into consideration the impacts that would occur under the no-action alternative

CULTURAL RESOURCES

METHODOLOGY

Potential impacts to cultural resources (historic structures and the cultural landscape) are explained in terms of type, context, duration, and intensity, which is consistent with the CEQ regulations. Analyses of potential impacts are intended to comply with the requirements of both the National Environmental Policy Act and Section 106 of National Historic Preservation Act (NHPA).

In accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing Section 106, impacts to cultural resources were identified and evaluated by:

1. Determining the Area of Potential Effects (APE);
2. Identifying cultural resources present in the APE that were either listed on or eligible for listing on the NRHP;
3. Applying the criteria of adverse effect to affected cultural resources listed on or eligible for listing on the NRHP; and
4. Considering ways to avoid, minimize, or mitigate adverse effects.

Under ACHP regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural

resource, which qualifies it for inclusion on the National Register of Historic Places (NRHP), by diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur at a later time or that would be cumulative over the course of time. A determination of *no adverse effect* means that there is an effect, but the effect would not diminish in any way characteristics of a cultural resource that would qualify it for inclusion on the NRHP.

Definitions of Intensity Levels

In order for a structure or building to be listed in the NRHP, it must meet one or more of the following criteria of significance: (A) it must be associated with events that have made a significant contribution to the broad patterns of our history; (B) associated with the lives of persons significant in our past; (C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; or (D) have yielded, or may be likely to yield, information important in prehistory or history. In addition, the structure or building must possess integrity of location, design, setting, materials, workmanship, feeling, and association (*National Register Bulletin, How to Apply the National Register Criteria for*

Evaluation). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Minor: Adverse impact - impact would not affect the character-defining features of a National Register of Historic Places eligible or listed structure or building. For purposes of Section 106, the determination of effect would be *no adverse effect*.
Beneficial impact - stabilization/preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Moderate: Adverse impact - impact would alter a character-defining feature(s) of the structure or building but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *no adverse effect*.
Beneficial impact - rehabilitation of a structure or building in accordance with the

Secretary of the Interior's Standards for the Treatment of Historic Properties. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Major: Adverse impact - impact would alter a character-defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*.

Beneficial impact - restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

The APE for the Tuskegee Airmen NHS was determined to be the original 44 acres that contained the historic core area of the complex as well as all affiliated and contributing features. The period of significance is 1945 because all contributing structures were in existence by this time. As the resource has previously been thoroughly documented, the eligible cultural resources were not resurveyed for the purpose of this document.

The application of the criteria of adverse effects to the historic core area of the Tuskegee Airmen NHS can be further broken down into the 15 individual structures, 9 extant and 6 non-extant. An assessment of the effects to the cultural landscape of the Tuskegee

Airmen NHS follows the individual structures assessment. As per the Code of Federal Regulations, an "adverse effect" is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association" (36 CFR 800.5).

An assessment of the reasonably foreseeable effects that would occur at a time later than project implementation is included in cumulative impacts. Any potential mitigation measures are discussed in the conclusions.

ARCHEOLOGICAL RESOURCES

Archaeological survey conducted by Southern Research Historic Preservation Consultants between April 29 and May 03, 2002 identified no NRHP eligible archaeological sites located within the APE of the proposed project. The Alabama State Historic Preservation Office (SHPO) concurred with this finding. In addition, the study area is not considered a Traditional Cultural Property, a determination supported by the lack of archaeological evidence that the area was ever substantially inhabited by prehistoric cultures. Therefore, potential impacts to archaeological resources from the proposed actions are not evaluated further, as no immediate or cumulative impacts are anticipated for archaeological resources under any proposed action.

HISTORIC STRUCTURES AND CULTURAL LANDSCAPES

Impacts from Implementing Alternative A – No Action

Under Alternative A, current management practices, policies, and park programs—such as maintenance, law enforcement, resource management, and park operations—would continue to be implemented with no major changes from current levels. Visitor facilities would be provided and maintained in accordance with the Development Concept Plan.

Implementation of Alternative A would not provide any additional trails, or designated areas for recreation; one new foot bridge and existing foot bridges would be replaced. No new visitor services or facilities would be developed. Nearly two-thirds of the Tuskegee Airmen NHS site would remain undeveloped and not actively managed.

Under Alternative A, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures, interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. The cultural landscape would continue to be managed under the current management plan, outlined under the Preferred Alternative described in the *TUAI NHS Rehabilitation of Moton Field DCP/EA*. Buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures, interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue.

Implementation of Alternative A would result in the continued use and maintenance of historic structures at their current level. Existing buildings and ghost structures of non-extant buildings would continue to be preserved and interpreted, creating no adverse effect. Consequently, there would be no adverse effect to the Tuskegee Airmen NHS's Cultural Landscape. Implementation of Alternative A would result in the continued use and maintenance of historic structures at their current level. Existing landscape features, including roads, curbs and drainage structures, the cistern and well system, and historic plantings, would continue to be preserved and interpreted, creating no adverse effect.

Cumulative Impacts. The current management plan in use at the Tuskegee Airmen NHS mandates the stabilization and permanent preservation of historic structures located on the site. The completed restoration, rehabilitation, and interpretation of historic structures located on the site are in keeping with the Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Buildings. Consideration and planning for the continued use and maintenance of the site and the historic structures located there has been developed and implemented. Consequently, there are no cumulative impacts anticipated for historic buildings and structures under Alternative A.

Likewise, the current management plan in use at the Tuskegee Airmen NHS mandates the stabilization and permanent preservation of other landscape features located on the site. The completed restoration,

rehabilitation, and interpretation of historic cultural landscape contained within the site are in keeping with the Secretary of the Interior's Standards and Guidelines. Consideration and planning for the continued use and maintenance of the site has been developed and implemented. Consequently, there are no cumulative impacts anticipated for the cultural landscape under Alternative A.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative A results in a finding of **No Adverse Effect** to historic structures or the cultural landscape located within the Tuskegee Airmen NHS. Under the current management plan at the Tuskegee Airmen NHS, historic structures located on the site, as well as the cultural landscape, would continue to be used and maintained, creating no adverse effects to cultural resources under implementation of Alternative A.

There would be no adverse impacts to resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus, minor to moderate beneficial impacts to the site's cultural resources and associated values would be created.

Impacts from Implementing Alternative B

Under Alternative B, the area outside of the historic core and visitor areas would be kept largely undeveloped and natural in character and would emphasize the natural environment.

Implementation of Alternative B would mandate a Historic 1945 Zone that would encompass Hangers One and Two, the Skyway Club, the Bath and Locker House, the Warehouse/Vehicle Storage Building, the entrance road, and the front gate. The Historic 1945 Zone would be adjacent to the Nature Discovery Zone on the southwest and east, and to the Visitor Orientation Zone on the southeast.

The Nature Discovery Zone would encompass approximately two-thirds of the site, including most of the eastern half of the site and a smaller area in the western portion of the site, which is bisected by the entrance road. The Visitor Orientation Zone would encompass the parking area, TANC site, Airmen Memorial, picnic area, overlook and visitor contact station. The Administration Zone would be located just south of the parking areas (occupying the three smaller parcels currently owned by Tuskegee University, the City of Tuskegee, and the NPS). The Administration Zone would be

accessed from Chappie James Drive. There would be no areas zoned for recreation.

Visitor services and facilities (in addition to those provided in the core historic and visitor areas) could include up to 4,000 feet of natural trails and 10 additional wayside exhibits. The potential for interpretive and educational opportunities (in addition to those provided in core historic and visitor areas) would be moderate to high due to the potential for additional wayside exhibits. Two new footbridges would also be installed. A maintenance and storage building for large vehicles, machinery trams, and golf carts would be constructed as well.

Under Alternative B, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e., ghost structures, interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. The D.A. Williston historic landscape scheme would be utilized to return the landscaping to reflect its original appearance. D.A. Williston was the original landscape architect for the site, and his design contained a moderate amount of landscaping. The Historic 1945 Zone would be the smallest under Alternative B. The visitor parking lot would be constructed in the Visitor Orientation Zone, outside of the viewshed of the historic core area. Some handicapped parking would be constructed within the historic core area in compliance with ADA legislation. A walkway connecting the parking lot, the historic core area, and the Overlook Area would be

constructed, allowing visitors to move between the Historic 1945 Zone and the Visitor Orientation Zone. Also, approximately 4,000 feet of natural trails and 10 additional wayside exhibits would be constructed and installed. The Historic 1945 Zone would be the smallest under Alternative B.

Implementation of Alternative B would result in the continued use and maintenance of historic structures at their current level. Existing buildings and ghost structures of non-extant buildings would continue to be preserved and interpreted within a minimal historic core area, creating no adverse effect to historic structures.

Due to the distance and topography of the area between the parking lot and the historic core area, some handicapped parking would be available within the historic core area. This would be considered an impact; however, Alternative B consists of primarily beneficial effects to the cultural landscape that outweighs the impact attributed to the handicapped parking. Additionally, future plans include the addition of a circa 1945 bus to shuttle visitors from the parking area to the historic core area when the funding becomes available.

The additional trails and roads would be in keeping with the original landscaping and plan of the site, and therefore would not create an impact. The installation of informational kiosks and wayside exhibits along trails would be in keeping with the establishing legislation of the site. The construction of picnic areas would create opportunities for enjoyment of the

site, and thus be a beneficial impact.

The restoration of the cultural landscape to the greatest extent possible is recommended as having no adverse effect to the resource as a whole. While there would be some new, non-historic construction, it would not impact the historic core area. Planning to minimize the harm to the resource would be taken into account whenever possible.

Cumulative Impacts. The implementation of Alternative B would create no anticipated cumulative impacts to historic structures located at the Tuskegee Airmen NHS. All restoration, rehabilitation, and reconstruction related to the cultural landscape of the Tuskegee Airmen NHS would be done in accordance with the Secretary of the Interior's Standards and Guidelines, and in accordance with establishing legislation of the Tuskegee Airmen NHS. The site's projected number of visitors and the impacts resulting from the use of the site and related facilities would also be taken into consideration and planned for appropriately; therefore, no cumulative effects to the historic cultural landscape are anticipated under implementation of Alternative B.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative B results in a finding of **No Adverse Effect** to the historic structures or the cultural landscape located within the Tuskegee Airmen NHS. Under Alternative B, historic structures located on the site would continue to be used and maintained under the current management plan, which would

result in the maintenance of the cultural landscape, creating no adverse effects to cultural resources under implementation of this alternative.

There would be no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The historic structures and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation. Since the Historic 1945 Zone would be the smallest out of all the considered alternatives, slightly less of the overall landscape would be preserved in its 1945 appearance. Overall, minor to moderate beneficial impacts to the site's cultural resources and associated values would be created.

Impacts from Implementing Alternative C

Under Alternative C, restoration of the most areas (compared to all other alternatives) of the park to the 1941-1945 historic period of significance would occur. At the same time, outside of the historic core and visitor areas, the natural environment would be

emphasized. The Historic 1945 Zone would encompass the historic core area as well as areas to the southeast and to the west (adjacent to the historic entrance road), creating the largest Historic 1945 Zone of all the considered alternatives and allowing for the broadest restoration and interpretive programs related to the Tuskegee Airmen story. The Historic 1945 Zone would be adjacent to the Nature Discovery Zone on the east, and to the Visitor Orientation Zone on the southeast.

Approximately half of the site would consist of the Nature Discovery Zone, including most of the eastern half of the site. The Visitor Orientation Zone would include the parking area, TANC site, Airmen Memorial, picnic area, overlook and visitor contact station (the same as Alternative B).

The Administration Zone is located just south of the parking areas (occupying the three smaller parcels currently owned by Tuskegee University, the City of Tuskegee, and the NPS), and would be accessed from Chappie James Drive (the same as Alternative B). Under Alternative C there would be no areas zoned for recreation.

Visitor services and facilities (in addition to those provided in the core historic and visitor areas) could include up to 3,500 feet of natural trails, 300 feet of hardened trails, and 10 additional wayside exhibits. The additional wayside exhibits would make the potential for interpretive and educational opportunities, outside of those provided in core historic and visitor areas, moderate to high. Two new footbridges would also be

installed. A maintenance and storage building for large vehicles, machinery trams, and golf carts would be constructed as well.

Under Alternative C, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures, interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. Treatment of the historic cultural landscape of the Tuskegee Airmen NHS would be nearly identical to that described under Alternative B; however, Alternative C would provide for the installation of 10 more wayside exhibits, 3,500 additional feet of natural trails, 300 feet of hardened trails, two new footbridges, and the construction of a maintenance and storage building for large vehicles, machinery trams, and golf. The Historic 1945 Zone would be the largest under Alternative C.

Consequences to historic structures under implementation of Alternative C would be identical to those described in Alternative B, creating no adverse effects. Although, because of the distance and topography of the area between the parking lot and the historic core area, handicapped parking would be available within the historic core area. This would be considered an impact; however, Alternative C consists of primarily beneficial effects to the cultural landscape that outweigh the impact attributed to the handicapped parking. Additionally, future plans include the addition of a circa 1945 bus to shuttle visitors from the parking area to the historic core

area when the funding becomes available.

The additional trails and roads would be in keeping with the original landscaping and plan of the site, and therefore would not create an impact. The installation of informational kiosks and wayside exhibits along trails would all be in keeping with the establishing legislation of the site. The construction of picnic areas would create opportunities for enjoyment of the site, and thus be a beneficial impact.

The restoration of the cultural landscape to the greatest extent possible is recommended as having no adverse effect to the resource as a whole. While there would be some new, non-historic construction, it would not impact the historic core area. Planning to minimize the harm to the resource was taken into account whenever possible.

Cumulative Impacts. The implementation of Alternative C would create no anticipated cumulative impacts to historic structures located at the Tuskegee Airmen NHS. All restoration, rehabilitation, and reconstruction related to the cultural landscape of the Tuskegee Airmen NHS would be done in accordance with the Secretary of the Interior's Standards and Guidelines, and in accordance with establishing legislation of the Tuskegee Airmen NHS. The site's projected number of visitors and the impacts resulting from the use of the site and related facilities would also be taken into consideration and planned for appropriately; therefore, no cumulative effects to the historic cultural landscape

are anticipated under implementation of Alternative C.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative C results in a finding of **No Adverse Effect** to the historic structures or the cultural landscape located within the Tuskegee Airmen NHS. Under Alternative C, historic structures located on the site would continue to be used and maintained under the current management plan, which would result in the maintenance of the cultural landscape, creating no adverse effects to cultural resources under implementation of this alternative.

There would be no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and TUAJ would continue to fulfill specific purposes identified in its establishing legislation; thus, minor to moderate beneficial impacts to the site's cultural resources and associated values would be created. Since the

Historic 1945 Zone would be the largest out of all the considered alternatives, more of the landscape would be preserved in its 1945 appearance, creating moderate to major beneficial impacts to the site's cultural resources and associated values.

Impacts from Implementing Alternative D - Agency and Environmentally Preferred Alternative

Implementation of Alternative D would offer the most diversity of visitor interpretive programs and recreational opportunities, as enhanced interpretive and recreational opportunities not provided in the previous three alternatives would be provided. Under Alternative D, the Historic 1945 Zone would be smaller than either Alternatives C or E but larger than Alternative B. The Historic Zone would encompass the core 1945 historic areas as well as areas to the west (adjacent to the historic entrance road), allowing for broad restoration and interpretive programs related to the Tuskegee Airmen story. The Historic 1945 Zone would be adjacent to the Administrative Zone on the northeast, Nature Discovery Zone on the east, and to the Visitor Orientation Zone on the southeast.

Approximately one-third of the site would consist of the Nature Discovery Zone, including large areas of the eastern portion of the site. The Visitor Orientation Zone would be slightly larger than in Alternatives B and C, encompassing the parking area, TANC site, Airmen Memorial, picnic area, overlook, visitor contact station, and the small parcel along Chappie James Drive that is currently owned by the Tuskegee University.

The Administration Zone would actually encompass two separate areas. One area would run along Chappie James Drive, occupying the two parcels currently owned by the City of Tuskegee and the NPS. The other area would consist of a triangular area just east of the hangars that extends to the park boundary. The area adjacent to the hangars could be accessed through the Historic 1945 Zone via the historic entrance road or via the Nature Discovery Zone (unpaved road surface).

The Recreation Zone would consist of areas in the southeastern portion of the site. The boundary of this zone follows existing roadbeds. This zone would allow low impact recreational activities and interpretive program topics that expand beyond the Tuskegee Airmen story. Visitor use would be predominantly self-guided. Activities could include hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors.

Visitor services and facilities (in addition to those provided in core historic and visitor areas) could include up to 5,000 ft of natural trails, 1,000 feet of hardened trails, 15 additional wayside exhibits, three kiosks, and a small group program area that could accommodate up to 30 people. The potential for interpretive and educational opportunities (in addition to those provided in core historic and visitor areas) would be high due to the potential for additional waysides, new kiosks and the group program area.

Additional facilities and infrastructure that could be accommodated in Alternative D

include picnic areas with tables and one small shelter, up to 3500 feet of unpaved single lane roads, a one-lane vehicle bridge, one to two VIP/Host pads with hookups, an unpaved parking that could accommodate up to eight cars and two buses, and an open space area (maximum of one acre) for low impact recreation. Two new footbridges would also be installed. A maintenance and storage building for large vehicles, machinery trams, and golf carts would be constructed as well.

Under Alternative D, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures, interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. Treatment of the historic cultural landscape of TUA1 would be nearly identical to that described under Alternative B; however, Alternative D would provide for the installation of five more wayside exhibits, 2,300 additional feet of trails, picnic areas, three small kiosks, a small group program area, a small parking lot, 3,500 additional feet of one-lane roads, and a one-lane bridge. The Historic 1945 Zone would be smaller than either Alternatives C or E but larger than Alternative B.

Consequences to historic structures under implementation of Alternative D would be identical to those described in Alternative B, creating no adverse effects. Although, because of the distance and topography of the area between the parking lot and the historic core area, handicapped parking would be available within the

historic core area. This would be considered an impact; however, Alternative D consists of primarily beneficial effects to the cultural landscape that outweigh the impact attributed to the handicapped parking. Additionally, future plans include the addition of a circa 1945 bus to shuttle visitors from the parking area to the historic core area when the funding becomes available.

The additional trails and roads would be in keeping with the original landscaping and plan of the site, and therefore would not create an impact. The installation of informational kiosks and wayside exhibits along trails would be in keeping with the establishing legislation of the site. The construction of picnic areas would create opportunities for enjoyment of the site, and thus be a beneficial impact.

The restoration of the cultural landscape to the greatest extent possible is recommended as having no adverse effect to the resource as a whole. While there would be some new, non-historic construction, it would not impact the historic core area. Planning to minimize the harm to the resource was taken into account whenever possible.

Cumulative Impacts. The implementation of Alternative D would create no anticipated cumulative impacts to historic structures located at the Tuskegee Airmen NHS. All restoration, rehabilitation, and reconstruction related to the cultural landscape of the Tuskegee Airmen NHS would be completed in accordance with the Secretary of the Interior's Standards and Guidelines, and in

accordance with establishing legislation of the Tuskegee Airmen NHS. The site's projected number of visitors and the impacts resulting from the use of the site and related facilities would also be taken into consideration and planned for appropriately; therefore, no cumulative effects to the historic cultural landscape are anticipated under implementation of Alternative D.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative D results in a finding of **No Adverse Effect** to the historic structures or the cultural landscape located within the Tuskegee Airmen NHS. Under Alternative D, historic structures located on the site would continue to be used and maintained under the current management plan, which would result in the maintenance of the cultural landscape, creating no adverse effects to cultural resources under implementation of this alternative.

There would be no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus, minor to moderate beneficial impacts to the site's cultural resources and associated values would be created. Since the Historic 1945 Zone would be fairly large (although not the largest) compared to the other considered alternatives, much of the landscape would be preserved in its 1945 appearance, creating moderate to major beneficial impacts to the site's cultural resources and associated values.

Impacts from Implementing Alternative E

Under Alternative E, a large portion of the park would be restored to the 1941-1945 historic period of significance while offering the most recreational opportunities outside of the historic core and visitor areas of all the alternatives. The Historic 1945 Zone would be slightly smaller than in Alternative C, but larger than in Alternatives B and D. The Historic Zone would be the core 1945 historic areas as well as areas to the southeast and to the west (adjacent to the historic entrance road), allowing for extensive restoration and interpretive programs related to the Tuskegee Airmen story. The Historic 1945 Zone would be adjacent to the Administrative Zone on the northeast, the Recreational Zone on the east, and the Visitor Orientation Zone on the southeast.

The Visitor Orientation Zone would encompass the parking area, TANC

site, Airmen Memorial, picnic area, overlook and visitor contact station. The Visitor Orientation Zone would include the three smaller parcels currently owned by Tuskegee University, the City of Tuskegee, and the NPS along Chappie James Drive that were zoned for administrative use in the other action alternatives.

The Administration Zone would consist of only the triangular area just east of the hangars that extends to the park boundary. The area would be accessed via the Recreation Zone.

The Recreation Zone would encompass approximately half of the site, including most of the eastern side of the site. This zone would allow low impact recreational activities and interpretive program topics that broaden out beyond the Tuskegee Airmen story. Visitor use would be predominantly self-guided. Activities could include hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors.

Visitor services and facilities (in addition to those provided in historic core and visitor areas) could include up to 5,000 feet of natural trails, 2,000 feet of hardened trails, 30 additional wayside exhibits, five kiosks, and a group program area that could accommodate up to 60 people.

Additional facilities and infrastructure that could be accommodated in Alternative E include the possibility for up to four picnic areas with tables, large shelters, and barbeque grills, up to 3,500 feet of paved single lane roads, a one-lane vehicle bridge up to four VIP/host pads with hookups, paved parking

that could accommodate up to twenty cars and six buses (or similar large vehicles), open area(s) (maximum of four acres) for low impact recreation, and a tram drop-off area. Other facilities that could potentially be installed would consist of a large kiosk for visitor orientation information, two restrooms, and two new footbridges would also be installed. A maintenance and storage building for large vehicles, machinery trams, and golf carts would be constructed as well.

Under Alternative E, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e., ghost structures, interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. Treatment of the historic cultural landscape of the Tuskegee Airmen NHS would be nearly identical to that described under Alternative B; however, Alternative E would provide for the installation of 20 more wayside exhibits, 3,200 additional feet of trails, picnic areas, kiosks (approximately five smaller kiosks and one large kiosk), a large group program area, a large parking lot, 3,500 additional feet of one-lane roads, a one-lane bridge, restrooms, and a tram drop-off area adjacent to the parking lot. The Historic 1945 Zone would be smaller than Alternatives C but larger than either Alternatives B or D.

Consequences to historic structures under implementation of Alternative E would be identical to those described in Alternative B, creating no adverse effects. Although, because of the distance and topography of the area between

the parking lot and the historic core area, handicapped parking would be available within the historic core area. This would be considered an impact; however, Alternative E consists of primarily beneficial effects to the cultural landscape that outweighs the impact attributed to the handicapped parking. Additionally, future plans include the addition of a circa 1945 bus to shuttle visitors from the parking area to the historic core area when the funding becomes available.

The additional trails and roads would be in keeping with the original landscaping and plan of the site, and therefore would not create an impact. The installation of informational kiosks and wayside exhibits along trails would all be in keeping with the establishing legislation of the site. The construction of picnic areas would create opportunities for enjoyment of the site, and thus be a beneficial impact.

The restoration of the cultural landscape to the greatest extent possible is recommended as having no adverse effect to the resource as a whole. While there would be some new, non-historic construction, it would not impact the historic core area. Planning to minimize the harm to the resource was taken into effect whenever possible.

Cumulative Impacts. The implementation of Alternative E would create no anticipated cumulative impacts to historic structures located at the Tuskegee Airmen NHS. All restoration, rehabilitation, and reconstruction related to the cultural landscape of the Tuskegee Airmen NHS would

be done in accordance with the Secretary of the Interior's Standards and Guidelines, and in accordance with establishing legislation of the Tuskegee Airmen NHS. The site's projected number of visitors and the impacts resulting from the use of the site and related facilities would also be taken into consideration and planned for appropriately; therefore, no cumulative effects to the historic cultural landscape are anticipated under implementation of Alternative E.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative E results in a finding of **No Adverse Effect** to the historic structures or the cultural landscape located within the Tuskegee Airmen NHS. Under Alternative E, historic structures located on the site would continue to be used and maintained under the current management plan, which would result in the maintenance of the cultural landscape, creating no adverse effects to cultural resources under implementation of this alternative.

There would no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management

plan or other relevant NPS planning document.

The historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus, minor to moderate beneficial impacts to the site's cultural resources and associated values would be created. Since the Historic 1945 Zone would be nearly as large as that provided by Alternative C (which the largest area prescribed for the Historic 1945 Zone out of all the considered alternatives), much of the landscape would be preserved in its 1945 appearance, creating moderate to major beneficial impacts to the site's cultural resources and associated values.

MUSEUM COLLECTIONS

Impacts from Implementing Alternative A – No Action

Under Alternative A, current management practices, policies, and park programs—such as maintenance, law enforcement, resource management, and park operations—would continue to be implemented with no major changes from existing levels. Currently, the museum collection of artifacts and photography associated with the Tuskegee Airmen is kept off site in archival storage, as required by 36 CFR Part 79. Visitor facilities would be provided and maintained in accordance with the Development Concept Plan.

Implementation of Alternative A would not provide any additional interpretational or educational

opportunities outside of those existing in the historic core and visitor areas. No new visitor services or facilities would be developed. Nearly two-thirds of the Tuskegee Airmen NHS site would remain undeveloped and not actively managed.

Cumulative Impacts. The current management plan in use at the Tuskegee Airmen NHS incorporates the recently developed interpretive plan for the Tuskegee Airmen NHS. This plan encompasses opportunities that have been developed in conjunction with the restoration of the historic core area, including tours and interpretation for visitors, as well as the interpretation of historic cultural landscape contained within the site. The museum collection of artifacts and photography associated with the Tuskegee Airmen would remain off site in archival storage. Consequently, there are no cumulative impacts anticipated for museum operations and interpretation under Alternative A.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative A results in a finding of **No Adverse Effect** to museum operations and interpretation within the Tuskegee Airmen NHS. Under the current management plan at the Tuskegee Airmen NHS, cultural resources would continue to be used and maintained as they are, creating no adverse effects under implementation of Alternative A.

There would be no adverse impacts to resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The museum operations and interpretation of the historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus, minor beneficial impacts to the site's cultural resources and associated values would be created.

Impacts from Implementing Alternative B

Under Alternative B, the area outside of the historic core and visitor areas would be kept largely undeveloped and natural in character and would emphasize the natural environment. Implementation of Alternative B would mandate a Historic 1945 Zone that would encompass Hangers One and Two, the Skyway Club, the Bath and Locker House, the Warehouse/Vehicle Storage Building, the entrance road, and the front gate. The Historic 1945 Zone would be adjacent to the Nature Discovery Zone on the southwest and east, and to the Visitor Orientation Zone on the southeast.

The Visitor Orientation Zone would encompass the parking area, TANC site, Airmen Memorial, picnic area, overlook and visitor contact station. Visitor services and facilities (in addition to those provided in the core historic and visitor areas) could include up to 10 additional wayside exhibits. The potential for interpretive and educational opportunities (in addition to those provided in core historic and visitor areas) would be moderate to high due to the potential for additional wayside exhibits.

Under Alternative B, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures and interpretive panels for non-extant buildings) resources. Also, 10 additional wayside exhibits would be constructed and installed, and the D.A. Williston historic landscape scheme would be utilized to return the landscaping to reflect its original appearance. The Historic 1945 Zone would be the smallest under Alternative B.

Currently, the museum collection of artifacts and photography associated with the Tuskegee Airmen is kept off site in archival storage, as required by 36 CFR Part 79. Upon project completion, this collection would be utilized on site, with appropriate archival consideration, in Tuskegee Airmen NHS-related interpretive programs, allowing the public to more readily benefit from the tangible elements of the site's rich heritage.

Implementation of Alternative B would result in the continued application of the Tuskegee Airmen

NHS interpretive plan, while increasing the interpretive material available to visitors. Existing buildings and ghost structures of non-extant buildings would continue to be interpreted within a minimal historic core area, creating no adverse effect to museum operations or interpretation. The installation of informational kiosks and wayside exhibits along trails would be in keeping with the establishing legislation of the site.

Cumulative Impacts. The implementation of Alternative B would create no anticipated cumulative impacts to museum operations and interpretation within the Tuskegee Airmen NHS.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative B results in a finding of **No Adverse Effect** to the museum operations or interpretation within the Tuskegee Airmen NHS. Under Alternative B, cultural resources on the site would continue to be used and maintained under the current management plan, creating no adverse effects to cultural resources under implementation of this alternative.

There would be no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and

3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The museum operations and interpretation of the historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus creating moderate to major beneficial impacts to the site's cultural resources and associated values.

Impacts from Implementing Alternative C

Under Alternative C, restoration of the most areas (compared to all other alternatives) of the park to the 1941-1945 historic period of significance would occur. At the same time, outside of the historic core and visitor areas, the natural environment would be emphasized. The Historic 1945 Zone would encompass the historic core area as well as areas to the southeast and to the west (adjacent to the historic entrance road), creating the largest Historic 1945 Zone of all the considered alternatives and allowing for the broadest restoration and interpretive programs related to the Tuskegee Airmen story. The Historic 1945 Zone would be adjacent to the Nature Discovery Zone on the east, and to the Visitor Orientation Zone on the southeast.

The Visitor Orientation Zone would include the parking area, TANC site, Airmen Memorial, picnic area, overlook and visitor contact station (the same as Alternative B).

Visitor services and facilities (in addition to those provided in the core historic and visitor areas) could include up to 10 additional wayside exhibits. The additional wayside exhibits would make the potential for interpretive and educational opportunities, outside of those provided in core historic and visitor areas, moderate to high.

Under Alternative C, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures and interpretive panels for non-extant buildings) resources. Also, 10 additional wayside exhibits would be constructed and installed, and the D.A. Williston historic landscape scheme would be utilized to return the landscaping to reflect its original appearance. The Historic 1945 Zone would be the smallest under Alternative B.

Currently, the museum collection of artifacts and photography associated with the Tuskegee Airmen is kept off site in archival storage, as required by 36 CFR Part 79. Upon project completion, this collection would be utilized on site, with appropriate archival consideration, in Tuskegee Airmen NHS-related interpretive programs, allowing the public to more readily benefit from the tangible elements of the site's rich heritage.

Implementation of Alternative C would result in the continued application of the Tuskegee Airmen NHS interpretive plan, while increasing the interpretive material available to visitors. Existing buildings and ghost structures of non-extant buildings

would continue to be interpreted within a maximum historic core area, creating no adverse effect to museum operations or interpretation. The installation of informational kiosks and wayside exhibits along trails would be in keeping with the establishing legislation of the site.

Cumulative Impacts. The implementation of Alternative C would create no anticipated cumulative impacts to museum operations and interpretation within the Tuskegee Airmen NHS.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative C results in a finding of **No Adverse Effect** to the museum operations or interpretation within the Tuskegee Airmen NHS. Under Alternative C, cultural resources on the site would continue to be used and maintained under the current management plan, creating no adverse effects to cultural resources under implementation of this alternative.

There would be no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The museum operations and interpretation of the historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus creating moderate to major beneficial impacts to the site's cultural resources and associated values.

Impacts from Implementing Alternative D

Implementation of Alternative D would offer the most diversity of visitor interpretive programs and recreational opportunities, as enhanced interpretive and recreational opportunities not provided in the previous three alternatives would be provided. Under Alternative D, the Historic 1945 Zone would be smaller than either Alternatives C or E but larger than Alternative B. The Historic Zone would encompass the core 1945 historic areas as well as areas to the west (adjacent to the historic entrance road), allowing for broad restoration and interpretive programs related to the Tuskegee Airmen story. The Historic 1945 Zone would be adjacent to the Administrative Zone on the northeast, Nature Discovery Zone on the east, and to the Visitor Orientation Zone on the southeast.

The Visitor Orientation Zone would be slightly larger than in Alternatives B and C, encompassing the parking area, TANC site, Airmen Memorial, picnic area, overlook, visitor contact station, and the small parcel along Chappie James Drive that is currently owned by the Tuskegee University.

Visitor services and facilities (in addition to those provided in core historic and visitor areas) could include up to 15 additional wayside exhibits, three kiosks, and a small group program area that could accommodate up to 30 people. The potential for interpretive and educational opportunities (in addition to those provided in core historic and visitor areas) would be high due to the potential for additional waysides, new kiosks and the group program area.

Under Alternative D, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e., ghost structures and interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. Treatment of the historic cultural landscape of TUAJ would be nearly identical to that described under Alternative B; however, Alternative D would provide for the installation of five more wayside exhibits, three small kiosks, and a small group program area. The Historic 1945 Zone would be smaller than either Alternatives C or E but larger than Alternative B.

Currently, the museum collection of artifacts and photography associated with the Tuskegee Airmen is kept off site in archival storage, as required by 36 CFR Part 79. Upon project completion, this collection would be utilized on site, with appropriate archival consideration, in Tuskegee Airmen NHS-related interpretive programs, allowing the public to more readily benefit from the tangible

elements of the site's rich heritage.

Implementation of Alternative D would result in the continued application of the Tuskegee Airmen NHS interpretive plan, while increasing the interpretive material available to visitors. Existing buildings and ghost structures of non-extant buildings would continue to be interpreted within a large historic core area, creating no adverse effect to museum operations or interpretation. The installation of wayside exhibits and kiosks along trails, as well as the group presentation area, would be in keeping with the establishing legislation of the site.

Cumulative Impacts. The implementation of Alternative D would create no anticipated cumulative impacts to museum operations and interpretation within the Tuskegee Airmen NHS.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative D results in a finding of **No Adverse Effect** to museum operations and interpretation within the Tuskegee Airmen NHS. Under Alternative D, cultural resources on the site would continue to be used and maintained under the current management plan, creating no adverse effects to cultural resources under implementation of this alternative.

There would be no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing

legislation of the Tuskegee Airmen NHS;

2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The museum operations and interpretation of the historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus creating moderate to major beneficial impacts to the site's cultural resources and associated values.

Impacts from Implementing Alternative E

Under Alternative E, a large portion of the park would be restored to the 1941-1945 historic period of significance while offering the most recreational opportunities outside of the historic core and visitor areas of all the alternatives. The Historic 1945 Zone would be slightly smaller than in Alternative C, but larger than in Alternatives B and D. The Historic Zone would be the core 1945 historic area as well as areas to the southeast and to the west (adjacent to the historic entrance road), allowing for extensive restoration and interpretive programs related to the Tuskegee Airmen story. The Historic 1945 Zone would be adjacent to the Administrative Zone on the northeast, the

Recreational Zone on the east, and the Visitor Orientation Zone on the southeast.

The Visitor Orientation Zone would encompass the parking area, TANC site, Airmen Memorial, picnic area, overlook and visitor contact station. The Visitor Orientation Zone would include the three smaller parcels currently owned by Tuskegee University, the City of Tuskegee, and the NPS along Chappie James Drive that were zoned for administrative use in the other action alternatives.

Visitor services and facilities (in addition to those provided in historic core and visitor areas) could include up to 30 additional wayside exhibits, five small kiosks, one larger kiosk, and a group program area that could accommodate up to 60 people.

Under Alternative E, buildings and structures would be left in their present condition, as restored, rehabilitated, or otherwise represented (i.e. ghost structures and interpretive panels for non-extant buildings) resources. Current levels of use and maintenance would continue. Treatment of the historic cultural landscape of the Tuskegee Airmen NHS would be nearly identical to that described under Alternative B; however, Alternative E would provide for the installation of 20 more wayside exhibits, kiosks (approximately five smaller kiosks and one large kiosk), and a large group program area. The Historic 1945 Zone would be smaller than Alternative C but larger than either Alternatives B or D.

Currently, the museum collection of artifacts and photography associated with the Tuskegee Airmen is kept off site in

archival storage, as required by 36 CFR Part 79. Upon project completion, this collection would be utilized on site, with appropriate archival consideration, in Tuskegee Airmen NHS-related interpretive programs, allowing the public to more readily benefit from the tangible elements of the site's rich heritage.

Implementation of Alternative E would result in the continued application of the Tuskegee Airmen NHS interpretive plan, while increasing the interpretive material available to visitors. Existing buildings and ghost structures of non-extant buildings would continue to be interpreted within a large historic core area, creating no adverse effect to museum operations or interpretation. The installation of wayside exhibits and kiosks along trails and throughout the site, as well as the large group presentation area, would be in keeping with the establishing legislation of the site.

Cumulative Impacts. The implementation of Alternative E would create no anticipated cumulative impacts to museum operations and interpretation within the Tuskegee Airmen NHS.

Conclusion. Application of the ACHP's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects) to Alternative E results in a finding of **No Adverse Effect** to museum operations and interpretation within the Tuskegee Airmen NHS. Under Alternative E, cultural resources on the site would continue to be used and maintained under the current management plan, creating no adverse effects to cultural

resources under implementation of this alternative.

There would no adverse impacts on resources or values whose conservation is:

1. Necessary to fulfill specific purposes identified in the establishing legislation of the Tuskegee Airmen NHS;
2. Key to the cultural integrity of the site or opportunities for enjoyment of the site; and
3. Identified as a goal in the site's general management plan or other relevant NPS planning document.

The museum operations and interpretation of the historic structures, cultural landscape, and values critical to the cultural integrity of the site would continue to be preserved, and the Tuskegee Airmen NHS would continue to fulfill specific purposes identified in its establishing legislation; thus creating moderate to major beneficial impacts to the site's cultural resources and associated values.

ETHNOGRAPHIC RESOURCES

Ethnographic resources related to the Tuskegee Airmen NHS include all NRHP eligible structures, objects, and landscapes within the site. Also included in this resource type are the interviews with persons historically associated with the site collected by the NPS.

The impacts of each proposed alternative on the NRHP eligible structures, objects, and

landscapes located within the Tuskegee Airmen NHS have been evaluated under the Historic Structures and Cultural Landscapes section in this chapter. The proposed actions are not evaluated further for impacts to the remaining ethnographic resources,

as no immediate or cumulative impacts are anticipated for these resources under any proposed action due to the intangible nature of the resources.

NATURAL RESOURCES

Analysis of natural resources was based on research, knowledge of existing resources, and the best professional judgment of planners, biologists, and botanists who have experience with similar types of projects. Information on the Tuskegee Airmen NHS's natural resources was gathered from several sources. As appropriate, additional sources of data are identified under each topic heading.

Where possible, map locations of sensitive resources were compared with the locations of proposed developments and modifications. Predictions about short-term (less than one year) and long-term (one year or more) site impacts were based on previous studies of development impacts on natural resources.

WATER RESOURCES AND WATER QUALITY

Methodology

For the most part, potential impacts of actions comprising the alternatives cannot be defined relative to site-specific locations. Consequently, water quality impacts of the alternatives were assessed qualitatively.

Negligible – An action may have an effect on water quality or the timing or intensity of flows or the designated uses of the water resource but it would not be readily measurable or detectable.

Minor – An action would have measurable effects on water quality or the timing or intensity of flows or the

designated uses of the water resource. Effects could include increased or decreased loads of sediment, debris, chemical or toxic substances, or pathogenic organisms.

Moderate – An action would have clearly detectable effects on water quality or the timing or intensity of flows and potentially would affect organisms or natural ecological processes or the designated uses of the water resource.

Major – An action would have substantial effects on water quality or the timing or intensity of flows and potentially would affect organisms or natural ecological processes or the designated uses of the water resource.

Impacts from Implementing Alternative A – No Action

The no-action alternative would not create any changes to current situations affecting water resources. Existing conditions and influences on hydrology and water quality would continue at the same level and intensity as they are now. There would be no new development or change in existing development in the floodplain.

Cumulative Impacts. Agriculture, residential development, and commercial development use available water sources, and disrupt natural runoff and percolation patterns. Runoff from adjacent properties (i.e., expansion of the runway at Moton Field Municipal Airport and addition of an access road to the Airport) may contain metals or chemicals that adversely affect water quality in the vicinity of

the Tuskegee Airmen NHS. These metals/chemicals can be transported by surface or subsurface flows. The NPS has no control or jurisdiction over Uphapee Creek or its tributaries outside of the park boundaries. These effects have adverse impacts on water resources in the region; however, these effects are negligible.

This alternative would have no contribution to these effects, and therefore there would be no cumulative effects.

Conclusion. The no-action alternative would have no new effect on water resources in the Tuskegee Airmen NHS. Because this alternative would have no effects on water resources, there would be no cumulative effects. There would be no impairment of this resource.

Impacts from Implementing Alternative B

Implementing this alternative would result in negligible adverse impacts on water resources resulting from development in the Administration and Nature Discovery Zones. Development in the Administration Zone could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs. Minimal development is planned for the Nature Discovery Zone - up to 4,000 ft of natural trails and 10 wayside exhibits. No additional impervious surface would be added in the Nature Discovery Zone; therefore, no additional runoff or erosion is anticipated in this zone.

The development planned under Alternative B could disrupt some surface water flow or groundwater percolation. There is also the concern of stormwater runoff from the newly developed impervious surfaces to potentially impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek. To control stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained. Mitigation such as silt fencing and sediment dams would reduce the impacts of the development planned under this alternative on water quality.

No new impacts to water quality would be expected as a result of implementing the Historic 1945 Zone or the Visitor Orientation Zone for Alternative B, because no new developments or changes to existing developments are proposed under this alternative for these zones at the park.

There would be no new development in the floodplain at the Tuskegee Airmen NHS.

Due to the minimal amount of development planned for this alternative and implementation of CBMPPs to prevent potential stormwater runoff to nearby

streams, negligible adverse impacts on water resources are anticipated.

Cumulative Impacts. Agriculture, residential development, and commercial development use available water sources, and disrupt natural runoff and percolation patterns. Runoff from adjacent properties (i.e., expansion of the runway at Moton Field Municipal Airport and addition of an access road to the Airport) may contain metals or chemicals that adversely affect water quality in the vicinity of the Tuskegee Airmen NHS. These metals/chemicals can be transported by surface or subsurface flows. The NPS has no control or jurisdiction over Uphapee Creek or its tributaries outside of park boundaries. These effects have adverse impacts on water resources in the region; however, these effects are negligible.

Due to the limited amount of development planned for this alternative, there would be no contribution to these water quality effects, and therefore there would be no cumulative effects.

Conclusion. This alternative would have negligible adverse long-term impacts on water resources and no effect on floodplains in the Tuskegee Airmen NHS. There would be no overall cumulative impacts to water resources from this alternative. There would be no impairment of this resource.

Impacts from Implementing Alternative C

This alternative would have impacts to water quality similar to Alternative B. Implementing

this alternative would result in negligible adverse impacts on water resources resulting from development in the Administration, Nature Discovery, and Historic 1945 Zones. Development in the Administration Zone could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs. Inside the Nature Discovery Zone, visitor services and facilities could include up to 3,500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. However, no additional impervious surface would be added in the Nature Discovery Zone; therefore, no additional runoff or erosion is anticipated in this zone. In Alternative C, the Historic 1945 Zone is larger than in Alternative B allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story which could result in the additional loss or clearing of vegetation in the western portion of the site. No new developments or changes to existing developments are proposed in the Visitor Orientation Zone for Alternative C.

The development planned under Alternative C could disrupt some surface water flow or groundwater percolation. There is also the concern of stormwater runoff from the newly developed impervious surfaces to potentially impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek. To control stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and*

Stormwater Management on Construction Sites and Urban Areas, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained. Mitigation such as silt fencing and sediment dams would reduce the impacts of the development planned under this alternative on water quality.

No new impacts to water resources would be expected as a result of implementing the Visitor Orientation Zone for Alternative C, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS.

There would be no new development in the floodplain at the Tuskegee Airmen NHS.

Due to the minimal amount of development planned for this alternative and implementation of CBMPPs to prevent potential stormwater runoff to nearby streams, negligible adverse impacts on water resources is anticipated.

Cumulative Impacts. Agriculture, residential development, and commercial development use available water sources, and disrupt natural runoff and percolation patterns. Runoff from adjacent properties (i.e., expansion of the runway at Moton Field Municipal Airport and addition of an access road to the Airport) may contain metals or

chemicals that adversely affect water quality in the vicinity of the Tuskegee Airmen NHS. These metals/chemicals can be transported by surface or subsurface flows. The NPS has no control or jurisdiction over Uphapee Creek or its tributaries outside of the NHS. These effects have adverse impacts on water resources in the region; however, these effects are negligible.

Due to the limited amount of development planned for this alternative, there would be no contribution to these water quality effects, and therefore there would be no cumulative effects.

Conclusion. This alternative would have a negligible adverse long-term impact on water resources and no effect on floodplains in the Tuskegee Airmen NHS. There would be no overall cumulative impacts to water resources from this alternative. There would be no impairment of this resource.

Impacts from Implementing Alternative D - Agency and Environmentally Preferred Alternative

This alternative involves slightly more development than Alternatives B and C. Included in this alternative is a Recreation Zone located in the southeastern portion of the site. The Recreation Zone would allow low impact recreational activities (i.e., hiking, walking, nature viewing, and picnicking) and interpretative programs. Facilities in the Nature Discovery and Recreation Zones could include up to 5,000 ft of natural trails, 1,000 ft of hardened trails, 15 wayside exhibits, 3 kiosks, and a small group program area that

could accommodate up to 30 people. Additional facilities and infrastructure that could be accommodated in the Recreation Zone in this alternative are picnic areas, unpaved roads, VIP/Host pads, unpaved parking, and an open space for low impact recreation. As in Alternative C, the Historic 1945 Zone is larger than in Alternative B allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story which could result in the additional loss or clearing of vegetation in the western portion of the site. The area zoned as Administration is slightly larger than the other alternatives, but could include the same facilities as the other alternatives (i.e., such as parking lots, side walks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs.) No new developments or changes to existing developments are proposed in the Visitor Orientation Zone for Alternative D.

The development planned under Alternative D could disrupt some surface water flow or groundwater percolation. There is also the concern of stormwater runoff from the newly developed impervious surfaces to potentially impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek. To control stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a

Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained. Mitigation such as silt fencing and sediment dams would reduce the impacts of the development planned under this alternative on water quality.

Due to the increase in development planned for Alternative D, short-term minor adverse impacts to water resources would be expected during construction of the facilities included in this alternative. These impacts would result from potential sediment runoff into nearby waterways during the clearing of vegetation and construction/grading activities. These activities may result in increases in sediment input and turbidity in the tributaries to Uphapee Creek. However, due to the implementation of CBMPPs to minimize the potential effects of stormwater runoff to these streams, negligible short-term adverse impacts on water resources would be anticipated.

Areas of the 100-year floodplain are located along the northern and western boundaries of the site. The northern portion of the Administration Zone for Alternative D includes a portion of the floodplain. The southern portion of the Administration Zone does not include any floodplain areas. The base flood elevation is 257 ft (FEMA 1982.) The northern area of the Administration Zone would need to be delineated for the base flood elevation and protection measures applied to avoid encroachment into

the floodplain. Floodplains would be delineated by qualified NPS staff or a registered professional hydrologist and the results would be incorporated during the design phase as well as clearly marked before construction. There would be no new development in the floodplain for Alternative D.

Cumulative Impacts. Agriculture, residential development, and commercial development use available water sources, and disrupt natural runoff and percolation patterns. Runoff from adjacent properties (i.e., expansion of the runway at Moton Field Municipal Airport and addition of an access road to the Airport) may contain metals or chemicals that adversely affect water quality in the vicinity of the Tuskegee Airmen NHS. These metals/chemicals can be transported by surface or subsurface flows. The NPS has no control or jurisdiction over Uphapee Creek or its tributaries outside of the NHS. These effects have adverse impacts on water resources in the region; however, these effects are negligible.

For this alternative, due to the implementation of CBMPPs to minimize the potential effects of stormwater runoff into Uphapee Creek, there would be no contribution to these water quality effects, and therefore there would be no cumulative effects.

Conclusion. This alternative would have a negligible adverse long-term impact on water resources and no effect on floodplains in the Tuskegee Airmen NHS. There would be no overall cumulative impacts to water resources from this alternative.

There would be no impairment of this resource.

Impacts from Implementing Alternative E

This alternative involves more development than the other alternatives. The Recreation Zone encompasses slightly more than ½ of the site, including most of the eastern half of the site. This zone would allow low impact recreation activities and interpretive programs. Visitor services and facilities in this zone could include up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and infrastructure in this zone that may be accommodated includes paved parking, VIP/host pads with hookups, single lane paved roads, and picnic areas. Some areas in the Recreation Zone would be maintained as open areas or with other recreational facilities. As in Alternatives C and D, the Historic 1945 Zone is larger allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story which could result in the additional loss or clearing of vegetation in the western portion of the site. The area zoned as Administration could include the same facilities as the other alternatives (i.e., such as parking lots, side walks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs). No new developments or changes to existing developments are proposed in the Visitor Orientation Zone for Alternative E.

The development planned under Alternative E could disrupt some surface water flow or groundwater percolation. There is also the concern of stormwater runoff from the newly developed impervious surfaces to potentially impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek. To control stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained. Mitigation such as silt fencing and sediment dams would reduce the impacts of the development planned under this alternative on water quality.

Due to the increase in development planned for Alternative E, short-term minor adverse impacts to water resources would be expected during construction of the facilities included in this alternative. These impacts would result from potential sediment runoff into nearby waterways during the clearing of vegetation and construction/grading activities. These activities may result in increases in sediment input and turbidity in the tributaries to Uphapee Creek. Even with the implementation of CBMPPs to minimize the potential effects of stormwater runoff to Uphapee Creek, minor short- and

long-term adverse impacts to water resources would be anticipated due to the additional impervious surfaces (i.e., hardened trails, administrative facilities, paved parking, VIP/host pads with hookups, single lane paved roads, picnic areas) planned for this alternative.

Areas of the 100-year floodplain are located within the area zoned for Administration. The base flood elevation is 257 ft (FEMA 1982). The Administration Zone would need to be delineated for the base flood elevation and protection measures applied to avoid encroachment into the floodplain. Floodplains would be delineated by qualified NPS staff or registered professional hydrologist and the results would be incorporated during the design phase as well as clearly marked before construction work. Due to the size of the area zoned as administration, it may not be possible to avoid development in the floodplain. This Administration Zone does not include an area along the southern portion of the site, which Alternative D does include.

Cumulative Impacts. Agriculture, residential development, and commercial development use available water sources, and disrupt natural runoff and percolation patterns. Runoff from adjacent properties (i.e., expansion of the runway at Moton Field Municipal Airport and addition of an access road to the Airport) may contain metals or chemicals that adversely affect water quality in the vicinity of the Tuskegee Airmen NHS. These metals/chemicals can be transported by surface or subsurface flows. The NPS has no control or jurisdiction over

Uphapee Creek or its tributaries outside of the Tuskegee Airmen NHS. These effects have adverse impacts on water resources in the region; however, these effects are negligible.

This alternative, in combination with the above adverse impacts on water resources, would result in a minor adverse cumulative impact; however, this alternative would contribute only a small portion of these effects.

Conclusion. Implementing Alternative E would have a long-term minor adverse impact on water resources and a long-term minor impact on the floodplain in the NHS. The overall cumulative impacts would be minor and adverse; this alternative's contribution to these effects would be relatively small. There would be no impairment of this resource.

SOILS

Methodology

Predictions about site impacts were based on knowledge of impacts on natural resources from development of visitor and operations facilities under similar situations. The following categories were used to evaluate the potential impacts on soils:

Negligible - The impact on soil resources would not be measurable. Any effects on productivity or erosion potential would be slight.

Minor - An action would change a soil's profile in a relatively small area, but it would not appreciably change the productivity of the soil or increase the potential for erosion of additional soil.

Moderate - An action would result in a change in quantity or alteration of the topsoil, overall biological productivity, or the potential for erosion to remove small quantities of additional soil. Changes to localized ecological processes would be of limited extent.

Major - An action would result in a change in the potential for erosion to remove large quantities of additional soil or in alterations to topsoil and overall biological productivity in a relatively large area. Significant ecological processes would be altered, and landscape-level changes would be expected.

Impacts from Implementing Alternative A - No Action

No new impacts to soil would be expected as a result of implementing Alternative A, because no new developments or changes to existing developments are proposed under this alternative at Tuskegee Airmen NHS. Impacts on soils from existing development would continue.

Cumulative Impacts. Actions that have occurred or will occur affecting soil resources include commercial and residential development on adjacent lands. Additionally, soil in the region has been historically affected by agriculture. Impacts from existing roads and developments would remain under the no-action alternative.

Currently there is human activity within Tuskegee Airmen NHS, concentrated where visitor facilities and historic displays are found. Maintenance of

historic structures and construction of visitor facilities have taken place at the park over the years. Some of the park was cleared and graded to construct a parking facility, and other areas have been cleared and graded to restore or construct facilities at Tuskegee Airmen NHS.

Foreseeable future actions of continued development outside the Tuskegee Airmen NHS would adversely impact soils through compaction and displacement from construction of roads, residential development, commercial development, and associated infrastructure.

This alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, and therefore there would be no project-related cumulative impacts to soils.

Conclusion. This alternative would have no effect on soil at Tuskegee Airmen NHS because no new developments or changes to existing developments are proposed. Because this alternative would result in no new impacts or changes to soil in the region, there would be no cumulative impacts. There would be no impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative B

Implementing this alternative would cause changes to the soils at Tuskegee Airmen NHS. Alternative B would result in development of an Administration Zone and minimal development (i.e., trails and wayside

exhibits) within the Nature Discovery Zone. Mitigation measures would be applied to minimize erosion during construction and operation of these zones. The Nature Discovery Zone could include development of up to 4,000 ft of natural trails and 10 wayside exhibits. Implementing the trails and wayside exhibits would result in short-term minor adverse impacts during construction, because soil would be displaced or disturbed. Long-term impacts to soil under Alternative B would be adverse but negligible and would result from visitor activities on the trails and at the wayside exhibits.

Development under this alternative would be concentrated in the Administration Zone. This area could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs. Construction of the Administration Zone would result in short-term minor adverse impacts during construction as soils are compacted, displaced, and disturbed. Long-term minor adverse impacts associated with the development of the Administration Zone would result from compaction and displacement of soil in this zone.

No new impacts to soil would be expected as a result of implementing the Historic 1945 Zone or the Visitor Orientation Zone for Alternative B, because no new developments or changes to existing developments are proposed under this alternative for these zones at Tuskegee Airmen NHS. Impacts on soil from existing development would continue.

Cumulative Impacts. Soil in the region has been historically affected by agriculture, commercial, and residential land uses and development. There has been human activity within the Tuskegee Airmen NHS, concentrated where visitor facilities and historic displays are found. Maintenance of historic structures and construction of visitor facilities have taken place at Tuskegee Airmen NHS over the years. Some of the park was cleared and graded to construct a parking facility, and other areas have been cleared and graded to restore or construct facilities at Tuskegee Airmen NHS. These activities have adversely impacted soils, through compaction and displacement, to varying degrees. Impacts from existing roads and developments would remain.

Foreseeable future actions of continued development outside the Tuskegee Airmen NHS would adversely impact soils through compaction and displacement from construction of roads, residential development, commercial development, and associated infrastructure.

This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in minor adverse cumulative impacts; however, this alternative would contribute a small portion of these effects.

Conclusion. This alternative would result in long-term minor adverse impacts. The overall cumulative effect on soils would be minor and adverse; this alternative's contribution to these effects would be small. There would be no impairment of

this resource as a result of implementing this alternative.

Impacts from Implementing Alternative C

This alternative would have impacts to soil similar to Alternative B. The Historic 1945 Zone is larger for this zone allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story. Inside the Nature Discovery Zone, visitor services and facilities vary slightly from Alternative B. This alternative could include up to 3500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. As with Alternative B, implementing the trails and wayside exhibits would result in short-term minor adverse impacts during construction, because soil would be compacted, displaced, or disturbed. Mitigation measures would be applied to minimize erosion during construction and operation of this zone. In the Nature Discovery Zone, long-term impacts to soil under Alternative C would be negligible and would result from visitor activities on the trails and at the wayside exhibits.

Impacts from the expanded Historic 1945 Zone in Alternative C would have an impact on soils if further restoration and interpretative programs are developed in this zone. Therefore, activities in this zone could result in minor long-term adverse impacts to soils.

Impacts from the Administration Zone would be the same as Alternative B. Construction of the Administration Zone would result in short-term minor adverse impacts during construction as soils are compacted, displaced,

and disturbed. Long-term minor adverse impacts associated with the development of the Administration Zone would result from compaction and displacement of soil in this zone. As with the Nature Discovery Zone mitigation measures would be applied to minimize erosion during construction and operation of this zone.

No new impacts to soils would be expected as a result of implementing the Visitor Orientation Zone for Alternative C, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on soils from existing development would continue.

Cumulative Impacts. Soil in the region has been historically affected by agriculture, commercial, and residential land uses and development. There has been human activity within the Tuskegee Airmen NHS, concentrated where visitor facilities and historic displays are found. Maintenance of historic structures and construction of visitor facilities have taken place at Tuskegee Airmen NHS over the years. Some of Tuskegee Airmen NHS was cleared and graded to construct a parking facility, and other areas have been cleared and graded to restore or construct facilities at Tuskegee Airmen NHS. These activities have adversely impacted soils and native vegetation to varying degrees by affecting soil compaction, erodibility, and nutrient availability.

Foreseeable future actions of continued development outside the Tuskegee Airmen NHS would

adversely impact soils through compaction and displacement from construction of roads, residential development, commercial development, and associated infrastructure.

This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in minor adverse cumulative impacts; however, this alternative would contribute only a slight portion of these effects.

Conclusion. Alternative C would result in long-term minor adverse impacts on soils in the Tuskegee Airmen NHS. The overall cumulative effect on soils would be minor and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative D - Agency and Environmentally Preferred Alternative

This alternative differs from Alternative C in that it offers a Recreation Zone. The Recreation Zone would allow low impact recreational activities and interpretative programs including hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors. Facilities in the Nature Discovery and Recreation Zones could include up to 5000 ft of natural trails, 1000 ft of hardened trails, 15 wayside exhibits, three kiosks, and a small group program area. Additional facilities and infrastructure that could be accommodated in the Recreation Zone in this alternative are picnic areas, unpaved roads, VIP/Host pads, unpaved parking,

and an open space. Constructing the visitor services and facilities in the Recreation Zone would result in short-term minor adverse impacts during construction as activities would disturb, compact, and displace soil. Long-term adverse minor impacts to soils would occur from increased impervious surface and activities on the trails, wayside exhibits, and the program area.

The Nature Discovery Zone would cover less of the park than Alternative C due to the addition of the Recreation Zone. Impacts in the Nature Discovery Zone would be similar to those described for Alternatives B and C and would result in short-term minor adverse impacts during construction and long-term negligible adverse impacts from visitor activities on the trails, program area, and at the wayside exhibits.

Impacts from the expanded Historic 1945 Zone would have a similar impact on soils as Alternative C. Potential restoration and interpretative programs planned in this zone could result in minor long-term adverse impacts to soils.

Impacts from the Administration Zone would be similar to Alternatives B and C. The Administration Zone is slightly larger than the other alternatives and includes areas along the northern and southern boundaries of the site. Construction of the Administration Zone would result in short-term minor adverse impacts. Long-term minor adverse impacts would result from compaction and displacement of soil and the increase in impervious surface for this zone.

No new impacts to soils would be expected as a result of implementing the Visitor Orientation Zone for Alternative D, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on soils from existing development would continue.

Overall, long-term minor adverse impacts on the soil resources would be expected as a result of implementing Alternative D. However, mitigation measures would be applied to minimize erosion during construction and operation of all the zones proposed for this alternative.

Cumulative Impacts. Soil in the region has been historically affected by agriculture, commercial, and residential land uses and development. There has been human activity within the Tuskegee Airmen NHS, concentrated where visitor facilities and historic displays are found. Maintenance of historic structures and construction of visitor facilities have taken place at Tuskegee Airmen NHS over the years. Some of Tuskegee Airmen NHS was cleared and graded to construct a parking facility, and other areas have been cleared and graded to restore or construct facilities at Tuskegee Airmen NHS. These activities have adversely impacted soils and native vegetation to varying degrees by affecting soil compaction, erodibility, and nutrient availability.

Foreseeable future actions of continued development outside of the Tuskegee Airmen NHS would adversely impact soils through compaction and displacement from

construction of roads, residential development, commercial development, and associated infrastructure.

This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in minor adverse cumulative impacts; however, this alternative would contribute only a slight portion of these effects.

Conclusions. This alternative would result in long-term minor adverse impacts on soils in the Tuskegee Airmen NHS. The overall cumulative effect on soils would be minor and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a result of this alternative.

Impacts from Implementing Alternative E

Alternative E would result in more changes in conditions affecting soils than would the other action alternatives. Alternative E offers the most recreational opportunities of all the alternatives outside of the historic core and visitor areas. The Visitor Orientation Zone is the largest of the alternatives. The Recreation Zone encompasses slightly more than ½ of the site, including most of the eastern half of the site. Visitor services and facilities in this zone could include up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and infrastructure in this zone that may be accommodated includes paved

parking, VIP/host pads with hookups, single lane paved roads, and picnic areas.

This alternative does not have a Nature Discovery Zone.

Impacts from the Administration Zone would be the same as Alternatives B through D. Construction of the Administration Zone would result in short-term minor adverse impacts during construction and long-term minor adverse impacts as a result of increased impervious surface, compaction, and displacement of soil for this zone.

Constructing the visitor services and facilities in the Recreation Zone would result in short-term moderate adverse impacts during construction due to soil disturbance, compaction, and displacement. Implementation of Alternative E would result in long-term moderate adverse impacts as a result of increased impervious surface associated with the potential development (i.e., trails, wayside exhibits, kiosks, paved parking, VIP/host pads, paved roads, and picnic areas) in the recreation zone. This alternative will result in a greater disturbed area than the other alternatives would.

No new impacts to soil would be expected as a result of implementing the Visitor Orientation Zone for Alternative E, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on soils from existing development would continue.

Impacts from the expanded Historic 1945 Zone would have a similar

impact on soils as Alternative C and D. Potential restoration and interpretative programs planned in this zone could result in minor long-term adverse impacts to soils.

Cumulative Impacts. Soil in the region has been historically affected by agriculture, commercial, and residential land uses and development. There has been human activity within the Tuskegee Airmen NHS, concentrated where visitor facilities and historic displays are found. Maintenance of historic structures and construction of visitor facilities has taken place at Tuskegee Airmen NHS over the years. Some of Tuskegee Airmen NHS was cleared and graded to construct a parking facility and other areas have been cleared and graded to restore or construct facilities at Tuskegee Airmen NHS. These activities have adversely impacted soils and native vegetation to varying degrees by affecting soil compaction, erodibility, and nutrient availability.

Foreseeable future actions of continued development outside the Tuskegee Airmen NHS would adversely impact soils through compaction and displacement from construction of roads, residential development, commercial development, and associated infrastructure.

This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in minor adverse cumulative impacts; however, this alternative would contribute only a portion of these effects.

Conclusion. This alternative would result in long-term moderate adverse impacts on soils in the Tuskegee Airmen NHS. The overall cumulative effect on soils would be minor and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a result of this alternative.

VEGETATION AND WETLANDS

Methodology

Impacts were assessed qualitatively. Site-specific information was obtained from the *Cultural Landscape Report* (Pond and Company 2002). Predictions about impacts were based on previous studies of development impacts on natural resources.

Negligible – The impact on vegetation (individuals and/or communities) would not be measurable. The abundance or distribution of individuals would not be affected or would be slightly affected. Ecological processes and biological productivity would not be affected.

Minor –The impact would not necessarily decrease or increase the area's overall biological productivity. An action would affect the abundance or distribution of individuals in a localized area but would not affect the viability of local or regional populations or communities.

Moderate –The impacts would result in a change in overall biological productivity in a small area. An action would affect a local population sufficiently to cause a change in abundance or distribution, but it would not affect the

viability of the regional population or communities. Changes to ecological processes would be of limited extent.

Major – An action would result in a change to overall biological productivity in a relatively large area. An action affecting a regional or local population of a species sufficiently to cause a change in abundance or in distribution to the extent that the population or communities would not be likely to return to its/their former level (adverse), or would return to a sustainable level (beneficial). Significant ecological processes would be altered.

Impacts from Implementing Alternative A – No Action

There would be no new ground disturbance or other major changes resulting from implementing this alternative at the Tuskegee Airmen NHS. The no-action alternative would not result in any new changes to vegetation other than those brought about by natural environmental processes. Current management practices, policies, and park operations would continue to be implemented with no major changes from current levels. Further development of the park facilities would not occur and zoning would not be applied. There would be no impact to vegetation as a result of this alternative and vegetation communities at Tuskegee Airmen NHS would remain the same. Management programs for non-native/exotic species would continue by using an integrated pest management (IPM) approach. There would be no new development or change in existing development in the wetlands.

Cumulative Impacts. Native vegetation in the region has been

historically affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. From early Native American cultures through the Industrial era, humans have relied on vegetation for food, fuel, and shelter. As more people came into the region, nonnative plants came with them. These actions altered the vegetation in relatively small areas throughout much of the region.

More recently, restoration of the historic core area and development of the visitor orientation area have taken place at the park. To return the historic core area to the period of significance, most of the existing trees and shrubs outside of the historic core area have been removed. Open meadows were planted with native grass species, similar to the original 1944 landscape plan. These activities have caused impacts by disrupting or destroying native vegetation to varying degrees. Foreseeable future actions of further development outside the Tuskegee Airmen NHS, such as road construction, residential development, commercial development, and associated infrastructure, would also adversely impact vegetation. These activities have caused adverse impacts by disrupting or destroying native vegetation to varying degrees. Seeds of nonnative plants carried by wind, animals, and humans have created infestations of noxious weeds and other invasive species that cause long-term adverse effects on native vegetation. The anticipated increase in visitation at Tuskegee Airmen NHS would most likely result in short-term adverse impacts such as

additional vegetation trampling and increased social trails.

The establishment of the Tuskegee Airmen NHS has resulted in long-term beneficial impacts on vegetation through exotic species eradication efforts.

The no-action alternative would not add to these impacts, and thus there would be no project-related cumulative effect on native vegetative resources.

Conclusion. Implementing the no-action alternative would have no new impacts on native vegetation. The no-action alternative would not add to impacts from other activities in the region and, thus, there would be no project-related cumulative effect on native vegetation resources. Thus, there would be no impairment of this resource as a result of implementing this alternative.

Impacts of Implementing Alternative B

This alternative would have the most acreage in the Nature Discovery Zone, preserving native vegetative communities. The Nature Discovery Zone would cover approximately 2/3 of Tuskegee Airmen NHS, including most of the eastern half of the site and a smaller area in the western portion of the site, which is bisected by the entrance road. Inside the Nature Discovery Zone, visitor services and facilities could include up to 4,000 ft of natural trails and 10 additional wayside exhibits. Implementing the trails and wayside exhibits would result in short-term minor adverse impacts during construction as the construction area may be cleared to allow the passage of equipment and construction materials. There

would be a long-term minor adverse impact to vegetation within the footprint of wayside displays and trails since vegetation would be removed from these areas and would not recolonize.

Development under this alternative would be concentrated in the Administration Zone. This area could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs. The Administration Zone would be located just south of the parking area. It is partially developed with existing vegetation consisting of early successional species within a managed meadow. Due to the clearing of vegetation for the construction of the administration facilities, impacts would be short-term minor and adverse. The loss of vegetation from the construction of the administration facilities would result in minor long-term adverse impacts in this zone.

No new impacts to vegetation would be expected as a result of implementing the Historic 1945 Zone or the Visitor Orientation Zone for Alternative B, because no new developments or changes to existing developments are proposed under this alternative for these zones at Tuskegee Airmen NHS. Impacts on vegetation from existing development would continue.

Wetlands were not surveyed and have not been identified in the eastern portion of the Tuskegee Airmen NHS. Wetlands would need to be delineated and protection measures applied before constructing trails and wayside exhibits in the Nature Discovery

Zone and before constructing administrative facilities in the Administrative Zone to avoid impacting wetlands at the park. Wetlands would be delineated by qualified NPS staff or certified wetland specialists and clearly marked before construction work. Construction activities would be performed in a cautious manner to prevent damage caused by equipment, erosion, and siltation. There will be no development in wetlands at the Tuskegee Airmen NHS.

Cumulative Impacts. Native vegetation in the region has been historically affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. From early Native American cultures through the Industrial era, humans have relied on vegetation for food, fuel, and shelter. As more people came into the region, nonnative plants came with them. These actions altered the vegetation in relatively small areas throughout much of the region.

More recently, restoration of the historic core area and development of the visitor orientation area have taken place at the park. To return the historic core area to the period of significance, most of the existing trees and shrubs outside of the historic core area have been removed. Open meadows were planted with native grass species, similar to the original 1944 landscape plan. These activities have caused impacts by disrupting or destroying native vegetation to varying degrees. Foreseeable future actions of further development outside the Tuskegee Airmen NHS, such as road construction, residential development, commercial development, and associated

infrastructure, would also adversely impact vegetation. These activities have caused adverse impacts by disrupting or destroying native vegetation to varying degrees. Seeds of nonnative plants carried by wind, animals, and humans have created infestations of noxious weeds and other invasive species that cause long-term adverse effects on native vegetation. The anticipated increase in visitation at Tuskegee Airmen NHS would most likely result in short-term adverse impacts such as additional vegetation trampling and increased social trails.

The establishment of the Tuskegee Airmen NHS has resulted in long-term beneficial impacts on vegetation through protection of native communities and exotic species eradication efforts.

This alternative, in combination with the above mentioned adverse impacts on vegetation, would result in a minor adverse cumulative impact; however, this alternative would contribute a small portion of these effects.

Conclusion. Implementing Alternative B would have long-term minor adverse impacts on vegetation from the construction of administrative facilities, trails, and wayside exhibits. However, establishment of this alternative would also result in long-term minor beneficial impacts to vegetation by preserving 2/3 of the park as a nature zone. This alternative would have no effect on wetlands in the Tuskegee Airmen NHS. The overall cumulative impacts would be minor and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a

result of implementing this alternative.

Impacts of Implementing Alternative C

This alternative would have impacts to vegetation similar to Alternative B. The acreage of the Nature Discovery Zone would cover approximately ½ of Tuskegee Airmen NHS, less than Alternative B. In Alternative C, the Historic 1945 Zone is larger than in Alternative B allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story. Inside the Nature Discovery Zone, visitor services and facilities could include up to 3500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. As with Alternative B, constructing the trails and wayside exhibits would result in short-term minor adverse impacts in the Nature Discovery Zone. In addition, the long-term effects on vegetation would be minor and adverse due to the loss of vegetation where trails would be put in and beneath the wayside exhibits. Visitor activities on the trails and at the wayside exhibits may also result in the trampling of some vegetation in the Nature Discovery Zone.

Impacts from the expanded Historic 1945 Zone in Alternative C could result in additional loss or clearing of vegetation in the western portion of the site. Vegetation in this area of the park consists of early and mid-successional species. Potential restoration and interpretative programs in this zone could result in minor long-term adverse impacts to vegetation.

Impacts to vegetation in the Administration Zone would be the same as Alternative B. Construction of the Administration Zone would result in short-term minor adverse impacts to vegetation. Minor long-term adverse impacts to vegetation in the Administration Zone would also be expected.

No new impacts to vegetation would be expected as a result of implementing the Visitor Orientation Zone for Alternative C, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on vegetation from existing development would continue.

Wetlands were not surveyed and have not been identified in the eastern portion of the Tuskegee Airmen NHS. Wetlands would need to be surveyed and delineated and protection measures applied before constructing trails and wayside exhibits in the Nature Discovery Zone and before constructing administrative facilities in the Administrative Zone to avoid impacting wetlands at the park. Wetlands would be delineated by qualified NPS staff or certified wetland specialists and clearly marked before construction work. Wetlands have been surveyed and delineated in the western portion of the park; therefore wetlands that are located in the Historic 1945 Zone will be avoided for development related to the potential restoration and interpretative programs planned for this zone. Construction activities would be performed in a cautious manner to prevent damage caused by equipment, erosion, and siltation. There will be no

development in wetlands at Tuskegee Airmen NHS.

Impacts from the expanded Historic 1945 Zone in Alternative C could result in additional loss or clearing of vegetation in the western portion of the site. Vegetation in this area of the park consists of early and mid-successional species. Potential restoration and interpretative programs in this zone could result in minor long-term adverse impacts to vegetation.

Cumulative Impacts. Cumulative impacts for this Alternative would be the same as those described for Alternative B. As stated earlier, native vegetation in the region has been historically affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. From early Native American cultures through the Industrial era, humans have relied on vegetation for food, fuel, and shelter. As more people came into the region, nonnative plants came with them. These actions altered the vegetation in relatively small areas throughout much of the region.

More recently, restoration of the historic core area and development of the visitor orientation area have taken place at the site. To return the historic core area to the period of significance, most of the existing trees and shrubs outside of the historic core area have been removed. Open meadows were planted with native grass species, similar to the original 1944 landscape plan. These activities have caused impacts by disrupting or destroying native vegetation to varying degrees.

Foreseeable future actions of further development outside the NHS, such as road construction, residential development, commercial development, and associated infrastructure, would also adversely impact vegetation. These activities have caused adverse impacts by disrupting or destroying native vegetation to varying degrees.

Seeds of nonnative plants carried by wind, animals, and humans have created infestations of noxious weeds and other invasive species that cause long-term adverse effects on native vegetation.

The anticipated increase in visitation at Tuskegee Airmen NHS would most likely result in short-term adverse impacts such as additional vegetation trampling and increased social trails.

The establishment of the Tuskegee Airmen NHS has resulted in long-term beneficial impacts on vegetation through protection of native communities and exotic species eradication efforts.

This alternative, in combination with the above mentioned adverse impacts on vegetation, would result in a minor adverse cumulative impact; however, this alternative would contribute a small portion of these effects.

Conclusion. Implementing Alternative C would have long-term minor adverse impacts on vegetation from the construction of administrative facilities, trails, and wayside exhibits. However, establishment of this alternative would also result in long-term beneficial impacts to

vegetation by preserving 1/2 of the park as a nature zone. These beneficial impacts would be less than those described for Alternative B. This alternative would have no effect on wetlands in the Tuskegee Airmen NHS. The overall cumulative impacts would be minor and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative D - Agency and Environmentally Preferred Alternative

This alternative balances preserving the natural environment and providing a variety of visitor experiences and recreational opportunities. The Nature Discovery Zone would cover approximately 1/3 of the site and would surround a Recreation Zone in the southeastern portion of the site. The Recreation Zone would allow low impact recreational activities (i.e., hiking, walking, nature viewing, and picnicking) and interpretative programs. Facilities in the Nature Discovery and Recreation Zones could include up to 5000 ft of natural trails, 1000 ft of hardened trails, 15 wayside exhibits, 3 kiosks, and a small group program area that could accommodate up to 30 people. Additional facilities and infrastructure that could be accommodated in the Recreation Zone in this alternative are picnic areas, unpaved roads, VIP/Host pads, unpaved parking, and an open space. As in Alternative C, the Historic 1945 Zone is larger than in Alternative B allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story.

Impacts in the Nature Discovery Zone would be similar to those described for Alternatives B and C, but would be lessened due to the smaller size of the Nature Discovery Zone. Short-term minor adverse impacts to vegetation would be expected during construction of the trails and wayside exhibits. Minor long-term adverse impacts to wildlife would result from implementation of this zone due to the loss of vegetation where trails would be put in and beneath the wayside exhibits. Visitor activities on the trails and at the wayside exhibits may also result in the trampling of some vegetation in the Nature Discovery Zone.

Constructing the visitor services and facilities in the Recreation Zone would result in short-term minor adverse impacts to vegetation. Implementation of the Recreation Zone would result in long-term minor adverse impacts to vegetation because of the replacement of vegetation with impervious surface, including a picnic shelter and VIP/Host pads, and an increase in unvegetated or managed vegetation areas, including single lane roads, unpaved parking areas, and open space for low impact recreation.

Impacts from the Administration Zone would be similar to Alternatives B and C. The area zoned as Administration is slightly larger than the other alternatives; therefore there would be a greater loss of vegetation to the Administration Zone under this Alternative. This zone would result in short-term minor adverse impacts during construction and minor long-term adverse impacts to vegetation as a result of increased impervious

surfaces for the administrative facilities.

Impacts from the expanded Historic 1945 Zone would be similar to Alternative C. Potential restoration and interpretative programs in this zone could result in minor long-term adverse impacts to vegetation.

No new impacts to vegetation would be expected as a result of implementing the Visitor Orientation Zone for Alternative D, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on vegetation from existing development would continue.

Wetlands were not surveyed and have not been identified in the eastern portion of the Tuskegee Airmen NHS. Wetlands would need to be delineated and protection measures applied before constructing recreational facilities in the Recreation Zone, trails and other nature related facilities in the Nature Discovery Zone, and administrative facilities in the Administrative Zone to avoid impacting wetlands at the park. Wetlands would be delineated by qualified NPS staff or certified wetland specialists and clearly marked before construction work. Wetlands have been surveyed and delineated in the western portion of the park; therefore wetlands that are located in the Historic 1945 Zone will be avoided for development related to the potential restoration and interpretative programs planned for this zone. Construction activities would be performed in a cautious manner to prevent damage caused by equipment, erosion, and siltation.

There will be no development in wetlands at the Tuskegee Airmen NHS.

Cumulative Impacts. Cumulative impacts for this Alternative would be the same as those described for Alternatives B and C. As stated earlier, native vegetation in the region has been historically affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. From early Native American cultures through the Industrial era, humans have relied on vegetation for food, fuel, and shelter. As more people came into the region, nonnative plants came with them. These actions altered the vegetation in relatively small areas throughout much of the region.

More recently, restoration of the historic core area and development of the visitor orientation area have taken place at the site. To return the historic core area to the period of significance, most of the existing trees and shrubs outside of the historic core area have been removed. Open meadows were planted with native grass species, similar to the original 1944 landscape plan. These activities have caused impacts by disrupting or destroying native vegetation to varying degrees.

Foreseeable future actions of further development outside the Tuskegee Airmen NHS, such as road construction, residential development, commercial development, and associated infrastructure, would also adversely impact vegetation. These activities have caused adverse impacts by disrupting or

destroying native vegetation to varying degrees.

Seeds of nonnative plants carried by wind and humans have created infestations of noxious weeds and other invasive species that cause long-term adverse effects on native vegetation.

The anticipated increase in visitation at Tuskegee Airmen NHS would most likely result in short-term adverse impacts such as additional vegetation trampling and increased social trails.

The establishment of the Tuskegee Airmen NHS has resulted in long-term beneficial impacts on vegetation through protection of native communities and exotic species eradication efforts.

This alternative, in combination with the above mentioned adverse impacts on vegetation, would result in a minor adverse cumulative impact; however, this alternative would contribute a small portion of these effects.

Conclusions. Implementing Alternative D would have a long-term minor adverse impact on vegetation. However, establishment of this alternative would also result in long-term beneficial impacts to vegetation by preserving 1/3 of the park as a nature zone. These beneficial impacts would be less than those described for Alternatives B and C. This alternative would have no effect on wetlands in Tuskegee Airmen NHS. The overall cumulative impacts would be minor and adverse; this alternative's contribution to these effects would be small. There would be no

impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative E

Alternative E would result in changes in conditions affecting vegetation. Alternative E offers the most recreational opportunities of all the alternatives outside of the core historic and visitor areas. The Historic 1945 Zone is slightly smaller than in Alternative C, but larger than in Alternatives B and D. The Visitor Orientation Zone is the largest of the alternatives that were zoned for administrative use in the other action alternatives. The Administrative Zone contains only the triangular area just east of the hangers that extends to the park boundary. The Recreation Zone encompasses slightly more than ½ of the site, including most of the eastern half of the site. This zone would allow low impact recreation activities and interpretive programs. Activities could include hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors. Visitor services and facilities in this zone could include up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and infrastructure in this zone that may be accommodated includes paved parking, VIP/host pads with hookups, single lane paved roads, and picnic areas. Some areas in the Recreation Zone would be maintained as open areas or with other recreational facilities. This alternative does not have a Nature Discovery Zone.

Impacts from the Administration Zone would be the same as Alternatives B, C, and D, but would affect a different area. Construction of the Administration Zone would result in short-term minor adverse impacts to vegetation during construction. Minor long-term adverse impacts to vegetation could be expected as a result of increased impervious surface in the Administration Zone.

Impacts from the expanded Historic 1945 Zone would be similar to Alternatives C and D. Potential restoration and interpretative programs in this zone could result in vegetation loss, which would result in minor long-term adverse impacts.

Constructing the visitor services and facilities in the Recreation Zone would result in short-term moderate adverse impacts during construction as vegetated areas are cleared for construction and construction equipment is brought into this Zone. Implementation of Alternative E would result in long-term moderate adverse impacts to vegetation. This impact is mainly due to the absence of Nature Discovery Zone in this alternative. In addition, the increase in visitor activities (i.e., hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors) and potential development (i.e., trails, wayside exhibits, kiosks, paved parking, VIP/host pads, paved roads, and picnic areas) in the recreation zone would have a greater impact on existing vegetation than the other alternatives. This alternative would result in a greater disturbance to vegetation from increased visitor activities.

No new impacts to vegetation would be expected as a result of implementing the Visitor Orientation Zone for Alternative E, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on vegetation from existing development would continue.

Wetlands were not surveyed and have not been identified in the eastern portion of Tuskegee Airmen NHS. Wetlands would need to be delineated and protection measures applied before constructing recreational facilities in the Recreation Zone and administrative facilities in the Administrative Zone to avoid impacting wetlands at the park. Wetlands would be delineated by qualified NPS staff or certified wetland specialists and clearly marked before construction work. Wetlands have been surveyed and delineated in the western portion of Tuskegee Airmen NHS; therefore wetlands that are located in the Historic 1945 Zone will be avoided for development related to the potential restoration and interpretative programs planned for this zone. Construction activities would be performed in a cautious manner to prevent damage caused by equipment, erosion, and siltation. There will be no development in wetlands at the Tuskegee Airmen NHS.

Cumulative Impacts. Cumulative impacts as a result of this Alternative would be slightly more than the other Alternatives. This is a result of the greater disturbed area within the Recreation Zone and because there is no Nature Discover Zone within this Alternative. As stated earlier, native vegetation in the

region has been historically affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. From early Native American cultures through the Industrial era, humans have relied on vegetation for food, fuel, and shelter. As more people came into the region, nonnative plants came with them. These actions altered the vegetation in relatively small areas throughout much of the region.

More recently, restoration of the historic core area and development of the visitor orientation area have taken place at the site. To return the historic core area to the period of significance, most of the existing trees and shrubs outside of the historic core area have been removed. Open meadows were planted with native grass species, similar to the original 1944 landscape plan. These activities have caused impacts by disrupting or destroying native vegetation to varying degrees. Foreseeable future actions of further development outside the Tuskegee Airmen NHS, such as road construction, residential development, commercial development, and associated infrastructure, would also adversely impact vegetation. These activities have caused adverse impacts by disrupting or destroying native vegetation to varying degrees. Seeds of nonnative plants carried by wind, animals, and humans have created infestations of noxious weeds and other invasive species that cause long-term adverse effects on native vegetation. The anticipated increase in visitation at Tuskegee Airmen NHS would most likely result in short-term adverse impacts such as

additional vegetation trampling and increased social trails.

The establishment of the Tuskegee Airmen NHS has resulted in long-term beneficial impacts on vegetation through protection of native communities and exotic species eradication efforts.

This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in minor adverse cumulative impacts; however, this alternative would contribute only a portion of these effects.

Conclusion. Implementing Alternative E would have long-term moderate adverse impacts on vegetation. This alternative would have no effect on wetlands in Tuskegee Airmen NHS. The overall cumulative impacts would be minor and adverse. There would be no impairment of this resource as a result of implementing this alternative.

WILDLIFE

Methodology

Impacts on wildlife are closely related to impacts on habitat. The evaluation considered whether actions would be likely to displace some or all individuals of a species in Tuskegee Airmen NHS or would result in loss or creation of habitat conditions needed for the viability of local or regional populations. Impacts associated with wildlife might include any change in roosting or foraging areas, food supply, protective cover, or distribution or abundance of species.

Negligible – The impact would not be measurable on individuals,

and the local populations would not be affected.

Minor – An action would affect the abundance or distribution of individuals in a localized area but would not affect the viability of local or regional populations.

Moderate – An action would affect a local population sufficiently to cause a minor change in abundance or distribution but would not affect the viability of the regional population.

Major – An action would affect a regional or local population of a species sufficiently to cause a change in abundance or in distribution to the extent that the population would not be likely to return to its former level (adverse), or would return to a sustainable level (beneficial).

Impacts from Implementing Alternative A – No Action

The no-action alternative would not result in any new changes in the current status of wildlife communities either in terms of species composition, habitat, or population dynamics other than those brought about by natural environmental processes. Current management practices, policies, and park operations would continue to be implemented with no major changes from current levels. Further development of park facilities would not occur and zoning would not be applied. Tuskegee Airmen NHS would continue its management, and education and interpretation. Visitor facilities would be provided and maintained. There would be no impact to wildlife as a result of this alternative, and wildlife would continue to utilize the park as habitat.

Cumulative Impacts. Regional wildlife populations have been historically affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. There have been subsequent minor adverse impacts in the form of habitat loss or disruption associated with these uses. This alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions; therefore, there would be no project-related cumulative impacts on wildlife populations. Because this alternative would have no new changes on wildlife, there would be no cumulative impacts.

Conclusion. Implementing the no-action alternative would have no new effect on wildlife populations. Because this alternative would have no new changes on wildlife, there would be no cumulative impacts. There would be no impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative B

This alternative would have the most acreage in the Nature Discovery Zone that preserves native wildlife habitat. The Nature Discovery Zone would cover approximately 2/3 of Tuskegee Airmen NHS, including most of the eastern half of the site and a smaller area in the western portion of the site, which is bisected by the entrance road. Inside the Nature Discovery Zone, visitor services and facilities could include up to 4,000 ft of natural trails and 10 additional wayside exhibits. Implementing the trails and wayside exhibits would result in short-term minor adverse impacts during

construction as the sounds and presence of heavy equipment and more humans would disturb and displace individual animals. Once the trails and waysides were constructed, the areas could be recolonized by wildlife such as birds, rodents, and other small mammals. Impacts to wildlife under Alternative B would be negligible. Negligible long-term adverse impacts to wildlife from visitor activities on the trails and at the wayside exhibits would be expected.

Development under this alternative would be concentrated in the Administration Zone. This area would include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs. The Administration Zone would be located just south of the parking area. It is partially developed with existing wildlife habitat consisting of a managed meadow and early successional species. This area offers little value as wildlife habitat. Construction of the Administration Zone would result in short-term minor adverse impacts during construction as the sounds and presence of heavy equipment and more humans would disturb and displace individual animals. Little wildlife habitat is expected to remain after the Administration Zone is implemented. Minor long-term adverse impacts to wildlife from loss of habitat in the Administration Zone would be expected.

No new impacts to wildlife would be expected as a result of implementing the Historic 1945 Zone or the Visitor Orientation

Zone for Alternative B, because no new developments or changes to existing developments are proposed under this alternative for these zones at Tuskegee Airmen NHS. Impacts on wildlife from existing development would continue.

Cumulative Impacts. Regional wildlife populations have been affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. There have been subsequent minor adverse impacts in the form of habitat loss or disruption associated with these uses. Establishment of this alternative will result in long-term beneficial impacts to wildlife by preserving 2/3 of the park as a nature zone. However, development in the Administration Zone would most likely result in minor adverse impacts to wildlife. This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in negligible and adverse cumulative impacts; however, this alternative would contribute a small portion of these effects.

Conclusion. Implementing Alternative B would have long-term minor adverse impacts on wildlife populations. However, establishment of this alternative would also result in long-term beneficial impacts to wildlife by preserving 2/3 of the park as a nature zone. The overall cumulative impacts would be negligible and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative C

This alternative would have similar impacts to wildlife as Alternative B. The acreage of the Nature Discovery Zone would cover approximately $\frac{1}{2}$ of Tuskegee Airmen NHS, slightly less than Alternative B. In Alternative C, the Historic 1945 Zone is larger than in Alternative B allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story. Inside the Nature Discovery Zone, visitor services and facilities could include up to 3500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. As with Alternative B, implementing the trails and wayside exhibits would result in short-term minor adverse impacts during construction; however, long-term impacts to wildlife under Alternative C would be negligible. These long-term adverse impacts to wildlife would be from visitor activities on the trails and at the wayside exhibits in the Nature Discovery Zone.

Impacts from the expanded Historic 1945 Zone could have an impact on wildlife. Habitat in this area of the park consists of early and mid successional species. Potential restoration and interpretative programs in this zone could result in habitat loss, which would result in minor long-term adverse impacts to wildlife.

Impacts from the Administration Zone would be the same as Alternative B. Construction of the Administration Zone would result in short-term minor adverse impacts during construction. Minor long-term adverse impacts to wildlife from loss of habitat in the Administration Zone would be expected.

No new impacts to wildlife would be expected as a result of implementing the Visitor Orientation Zone for Alternative C, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on wildlife from existing development would continue.

Cumulative Impacts. Regional wildlife populations have been affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. There have been subsequent minor adverse impacts in the form of habitat loss or disruption associated with these uses. Establishment of this alternative will result in long-term beneficial impacts to wildlife by preserving $\frac{1}{2}$ of the park as a nature zone. However, development in the Administration Zone would most likely result in minor adverse impacts to wildlife. This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in negligible and adverse cumulative impacts; however, this alternative would contribute a small portion of these effects.

Conclusion. Implementing Alternative C would have long-term minor adverse impacts on wildlife populations. However, establishment of this alternative would also result in long-term beneficial impacts to wildlife by preserving $\frac{1}{2}$ of the park as a nature zone. The overall cumulative impacts would be negligible and adverse; this alternative's contribution to these effects would be small. There would be no impairment of

this resource as a result of implementing this alternative.

Impacts from Implementing Alternative D - Agency and Environmentally Preferred Alternative

This alternative balances preserving the natural environment and providing a variety of visitor experiences and recreational opportunities. The Nature discovery Zone would cover approximately 1/3 of the site and would surround a Recreation Zone in the southeastern portion of the site. The Recreation Zone would allow low impact recreational activities (i.e., hiking, walking, nature viewing, and picnicking) and interpretative programs. Facilities in the Nature Discovery and Recreation Zones would include up to 5000 ft of natural trails, 1000 ft of hardened trails, 15 wayside exhibits, 3 kiosks, and a small group program area that could accommodate up to 30 people. Additional facilities and infrastructure that could be accommodated in the Recreation Zone in this alternative are picnic areas, unpaved roads, VIP/Host pads, unpaved parking, and an open space.

Impacts in the Nature Discovery Zone would be similar to those described for Alternatives B and C. Short-term minor adverse impacts to wildlife would be expected during construction. However, negligible long-term adverse impacts to wildlife would result from implementation of this zone.

Constructing the visitor services and facilities in the Recreation Zone would result in short-term minor adverse impacts to wildlife. Implementation of the Recreation Zone would result in long-term

minor adverse impacts to wildlife due to the low impact recreational activities planned for this zone.

Impacts from the Administration Zone would be similar to Alternatives B and C. The area zoned as Administration is slightly larger than the other alternatives; therefore there would be a greater loss of habitat to the Administration Zone under this Alternative. This zone would result in short-term minor adverse impacts during construction and minor long-term adverse impacts to wildlife for the implementation of the zone.

Impacts from the Historic 1945 Zone would be similar to Alternative C. Potential restoration and interpretative programs in this zone could result in habitat loss, which would result in minor long-term adverse impacts to wildlife.

No new impacts to wildlife would be expected as a result of implementing the Visitor Orientation Zone for Alternative D, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on wildlife from existing development would continue.

Cumulative Impacts. Regional wildlife populations have been affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. There have been subsequent minor adverse impacts in the form of habitat loss or disruption associated with these uses. Establishment of this alternative would result in long-term beneficial impacts to wildlife by preserving 1/3 of the

park as a nature zone. However, development in the Administration, Recreation, and Historic Zones would most likely result in short-term and long-term minor adverse impacts to wildlife. This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in negligible and adverse cumulative impacts; however, this alternative would contribute a small portion of these effects.

Conclusions. Implementing Alternative D would have minor adverse impacts on wildlife populations in the long-term. However, establishment of this alternative would also result in long-term beneficial impacts to wildlife by preserving 1/3 of the park as a nature zone. The overall cumulative impacts would be negligible and adverse; this alternative's contribution to these effects would be small. There would be no impairment of this resource as a result of implementing this alternative.

Impacts from Implementing Alternative E

Alternative E would result in changes in conditions affecting wildlife populations or their habitat. Alternative E offers the most recreational opportunities of all the alternatives outside of the core historic and visitor areas. The Historic 1945 Zone is slightly smaller than in Alternative C, but larger than in Alternatives B and D. The Visitor Orientation Zone is the largest of the alternatives that were zoned for administrative use in the other action alternatives. The Administrative Zone contains only the triangular area just east of the hangers that extends to the park boundary. The Recreation

Zone encompasses slightly more than 1/4 of the site, including most of the eastern half of the site. This zone would allow low impact recreation activities and interpretive programs. Activities could include hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors. Visitor services and facilities in this zone could include up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and infrastructure in this zone that may be accommodated includes paved parking, VIP/host pads with hookups, single lane paved roads, and picnic areas. Some areas in the Recreation Zone would be maintained as open areas or with other recreational facilities.

Impacts from the Administration Zone would be the same as the other alternatives. Construction of the Administration Zone would result in short-term minor adverse impacts during construction. Minor long-term adverse impacts to wildlife from loss of habitat in the Administration Zone would be expected.

Impacts from the expanded Historic 1945 Zone would be similar to Alternatives C and D. Potential restoration and interpretative programs in this zone could result in habitat loss, which would result in minor long-term adverse impacts to wildlife.

Constructing the visitor services and facilities in the Recreation Zone would result in short-term minor adverse impacts during construction as the sounds and presence of heavy equipment and

more humans would disturb and displace individual animals. Implementation of Alternative E would result in long-term moderate adverse impacts to wildlife. This impact is mainly due to the absence of Nature Discovery Zone in this alternative. In addition, the increase in visitor activities (i.e., hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors) and potential development (i.e., trails, wayside exhibits, kiosks, paved parking, VIP/host pads, paved roads, and picnic areas) in the recreation zone will have more of an impact on wildlife and wildlife habitat than the other alternatives. This alternative will result in less available habitat for wildlife to utilize as well as more disturbance to existing wildlife from increased visitor activities.

No new impacts to wildlife would be expected as a result of implementing the Visitor Orientation Zone for Alternative E, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on wildlife from existing development would continue.

Cumulative Impacts. Regional wildlife populations have been affected by agriculture, commercial, and residential land uses and the introduction of nonnative species. There have been subsequent minor adverse impacts in the form of habitat loss or disruption associated with these uses. Development in the Administration Zone would most likely result in long-term minor adverse impacts and development in the Recreation Zone would result in long-term moderate adverse

impacts to wildlife. This alternative, in combination with the other past, present, and reasonably foreseeable future actions in the region would result in minor and adverse cumulative impacts; however, this alternative would contribute a small portion of these effects.

Conclusion. Implementing Alternative E would have long-term moderate adverse impacts on wildlife populations. The overall cumulative impacts would be minor and adverse. There would be no impairment of this resource as a result of implementing this alternative.

SELECTED SPECIAL STATUS SPECIES AND ECOLOGICALLY CRITICAL AREAS

Methodology

Through coordination with the U.S. Fish and Wildlife Service, species of special concern were identified that could be located in or near the Tuskegee Airmen NHS. Information on each species, including their preferred habitat, prey, and foraging areas, was included. For special status species, including federally listed species, the following impact intensities were used. These definitions are consistent with the language used to determine effects on threatened and endangered species under Section 7 of the Endangered Species Act.

No effect – The action would cause no effect on the special status species or critical habitat.

Not likely to adversely affect – The action would be expected to result in discountable effects on a species or critical habitat (that is, unlikely to occur and not able to be

meaningfully measured, detected, or evaluated), or it would be completely beneficial.

Likely to adversely affect – The action would result in a direct or indirect adverse effect on a species or critical habitat, and the effect would not be discountable or completely beneficial.

Impacts from Implementing Alternative A – No Action

This alternative would continue current management of the Tuskegee Airmen NHS with no changes in wildlife management. No changes in development would occur and, therefore, no new impacts on habitat would occur. Existing conditions and situations would continue. Therefore, there would be no effect and no change from the current status of the federally listed southern clubshell mussel, ovate clubshell mussel, and the finelined pocketbook mussel from implementing this alternative.

Additionally, there would be no effect to the designated critical habitat in Uphapee Creek from implementing this alternative.

Cumulative Impacts. Stormwater runoff, degraded water quality, and loss of habitat are some of the reasons aquatic species become threatened or endangered. In general, aquatic species are slowly becoming more impacted by human activity, causing individuals and populations to either adapt or decline in numbers. Increased stormwater runoff has occurred in the region as a result of commercial and residential development, road construction, and agriculture. Incremental development of the region has affected the abundance and diversity of aquatic species

by impacting the water quality of the rivers and streams. However, due to the limited development in the vicinity of the park, water quality impacts are not expected to be significant. Therefore, the combination of these actions may cause negligible adverse impacts on special status species in the vicinity of the Tuskegee Airmen NHS.

The three mussel species require unique aquatic habitats to thrive. The habitat of the finelined pocketbook mussel includes both high and low gradient creeks and medium-sized rivers of moderate gradient and riffle. The southern clubshell mussel needs highly oxygenated streams with sand and gravel substrate, and the ovate clubshell mussel prefers habitat in moderate to high gradient large and medium-sized rivers or creeks with pools and riffles. The finelined pocketbook mussel currently appears to be restricted to creek habitat and may have been eliminated from most river habitat throughout its range (NatureServe 2003 and Smith 1993). Habitat modification, sedimentation, and water quality degradation have led to the decline of the ovate clubshell mussel (NatureServe 2003).

Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species.

Conclusion. The no-action alternative would have no effect on the mussels or designated critical habitat in Uphapee Creek. Because this alternative would not contribute to the impacts of other

past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed species, candidate, or other special status species. No impairment of special status species would occur as a result of implementing the no-action alternative.

Impacts from Implementing Alternative B

Although there are some changes in Tuskegee Airmen NHS development proposed under this alternative, it would not occur in potential habitat for the mussel species. Stormwater runoff from the newly developed impervious surfaces proposed under this alternative has the potential to impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek, potentially affecting the three mussel species. To control additional stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained.

Development under this alternative would be concentrated in the Administration Zone. This area could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar

structures to support park operational and administrative needs.

The Nature Discovery Zone would primarily consist of undeveloped areas with some trails and wayside exhibits. No additional impervious surface would be added in the Nature Discovery Zone. No additional runoff or erosion is anticipated in this zone.

No new developments or changes to existing developments are proposed for the Historic 1945 Zone or the Visitor Orientation Zone for Alternative B.

Due to the minimal amount of development planned for this alternative and implementation of CBMPPs to minimize the potential effect of stormwater runoff impacts to the water quality of nearby streams, no effect on the special status species or critical habitat is expected. Additionally, there would be no effect to the designated critical habitat in Uphapee Creek from implementing this alternative.

Cumulative Impacts. Stormwater runoff, degraded water quality, and loss of habitat are some of the reasons aquatic species become threatened or endangered. In general, aquatic species are slowly becoming more impacted by human activity, causing individuals and populations to either adapt or decline in numbers. Increased stormwater runoff has occurred in the region as a result of commercial and residential development, road construction, and agriculture. Incremental development of the region has affected the abundance and diversity of aquatic species by impacting the water quality of the rivers and streams. However,

due to the limited development in the vicinity of the Tuskegee Airmen NHS, water quality impacts are not expected to be significant. Therefore, the combination of these actions may cause negligible adverse impacts on special status species in the vicinity of the park.

The three mussel species require unique habitats to thrive. The habitat of the finelined pocketbook mussel includes both high and low gradient creeks and medium-sized rivers of moderate gradient and riffle. The southern clubshell mussel needs highly oxygenated streams with sand and gravel substrate and the ovate clubshell mussel prefers habitat with moderate to high gradient large and medium-sized rivers or creeks with pools and riffles. The finelined pocketbook mussel currently appears to be restricted to creek habitat and may have been eliminated from most river habitat throughout its range (NatureServe 2003 and Smith 1993). Habitat modification, sedimentation, and water quality degradation have led to the decline of the ovate clubshell mussel (NatureServe 2003).

Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species.

Conclusion. Implementing Alternative B would have no effect on the mussels or designated critical habitat in Uphapee Creek. Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there

would be no project-related cumulative impacts on listed, candidate, or other special status species. No impairment of special status species would occur as a result of this alternative.

Impacts from Implementing Alternative C

As with Alternative B, proposed development changes to the Tuskegee Airmen NHS under this alternative would not occur in potential habitat for the mussel species. However, stormwater runoff from the newly developed impervious surfaces proposed under this alternative has the potential to impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek, potentially affecting the three mussel species. To control additional stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained.

Development under this alternative would also be concentrated in the Administration Zone. This area could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs.

The potential restoration and interpretative programs planned for the expanded Historic 1945 Zone could result in additional loss or clearing of vegetation in the western portion of the site.

No new developments or changes to existing developments are proposed for the Visitor Orientation Zone for Alternative C.

The acreage of the Nature Discovery Zone would cover approximately $\frac{1}{2}$ of Tuskegee Airmen NHS, slightly less than Alternative B. Inside the Nature Discovery Zone, visitor services and facilities could include up to 3500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. The Nature Discovery Zone would primarily consist of undeveloped areas with some trails and wayside exhibits.

Due to the minimal amount of development planned for this alternative and implementation of CBMPPs to prevent potential stormwater runoff impacts to the water quality of nearby streams, no effect on the special status species or critical habitat is expected. Additionally, there would be no effect to the designated critical habitat in Uphapee Creek from implementing this alternative.

Cumulative Impacts. Stormwater runoff, degraded water quality, and loss of habitat are some of the reasons aquatic species become threatened or endangered. In general, aquatic species are slowly becoming more impacted by human activity, causing individuals and populations to either adapt or decline in numbers. Increased stormwater runoff has occurred in the region

as a result of commercial and residential development, road construction, and agriculture. Incremental development of the region has affected the abundance and diversity of aquatic species by impacting the water quality of the rivers and streams. However, due to the limited development in the vicinity of the Tuskegee Airmen NHS, water quality impacts are not expected to be significant. Therefore, the combination of these actions may cause negligible adverse impacts on special status species in the vicinity of the park.

The three mussel species require unique habitats to thrive. The habitat of the finelined pocketbook mussel includes both high and low gradient creeks and medium-sized rivers of moderate gradient and riffle. The southern clubshell mussel needs highly oxygenated streams with sand and gravel substrate and the ovate clubshell mussel prefers habitat with moderate to high gradient large and medium-sized rivers or creeks with pools and riffles. The finelined pocketbook mussel currently appears to be restricted to creek habitat and may have been eliminated from most river habitat throughout its range (NatureServe 2003 and Smith 1993). Habitat modification, sedimentation, and water quality degradation have led to the decline of the ovate clubshell mussel (NatureServe 2003).

Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species.

Conclusion. Implementing Alternative C would have no effect on the mussels or designated critical habitat in Uphapee Creek. Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species. No impairment of special status species would occur as a result of this alternative.

Impacts from Implementing Alternative D - Agency and Environmentally Preferred Alternative

This alternative balances preserving the natural environment and providing a variety of visitor experiences and recreational opportunities. As with Alternatives B and C, proposed development changes to the Tuskegee Airmen NHS under this alternative would not occur in potential habitat for the mussels. However, stormwater runoff from the newly developed impervious surfaces proposed under this alternative has the potential to impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek potentially affecting the three mussel species. In addition, impacts to water quality would be expected during construction of the facilities; however, these impacts are not likely to adversely affect the three mussel species. To control stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a

Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained.

The area zoned as Administration for this alternative is slightly larger than the other alternatives. This area could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs.

The potential restoration and interpretative programs planned for the expanded Historic 1945 Zone could result in additional loss or clearing of vegetation in the western portion of the site.

No new developments or changes to existing developments are proposed for the Visitor Orientation Zone for Alternative D.

The Nature Discovery Zone would cover approximately 1/3 of the site. Development in the Nature Discovery and Recreation Zones could include up to 5000 ft of natural trails, 1000 ft of hardened trails, 15 wayside exhibits, 3 kiosks, and a small group program area that could accommodate up to 30 people. The Recreation Zone would allow low impact recreational activities (i.e., hiking, walking, nature viewing, and picnicking) and interpretative programs. Additional facilities and infrastructure that could be accommodated in the Recreation Zone in this alternative are picnic areas, unpaved roads,

VIP/Host pads, unpaved parking, and an open space.

Even though this alternative involves more development at the Tuskegee Airmen NHS, the implementation of CBMPPs to minimize potential stormwater impacts to the water quality of nearby streams, no effect on the special status species or designated critical habitat in Uphapee Creek is expected for this alternative.

Cumulative Impacts. Stormwater runoff, degraded water quality, and loss of habitat are some of the reasons aquatic species become threatened or endangered. In general, aquatic species are slowly becoming more impacted by human activity, causing individuals and populations to either adapt or decline in numbers. Increased stormwater runoff has occurred in the region as a result of commercial and residential development, road construction, and agriculture. Incremental development of the region has affected the abundance and diversity of aquatic species by impacting the water quality of the rivers and streams. However, due to the limited development in the vicinity of the Tuskegee Airmen NHS, water quality impacts are not expected to be significant. Therefore, the combination of these actions may cause negligible adverse impacts on special status species in the vicinity of the park.

The three mussel species require unique habitats to thrive. The habitat of the finelined pocketbook mussel includes both high and low gradient creeks and medium-sized rivers of moderate gradient and riffle. The southern clubshell mussel needs highly

oxygenated streams with sand and gravel substrate and the ovate clubshell mussel prefers habitat with moderate to high gradient large and medium-sized rivers or creeks with pools and riffles. The finelined pocketbook mussel currently appears to be restricted to creek habitat and may have been eliminated from most river habitat throughout its range (NatureServe 2003 and Smith 1993). Habitat modification, sedimentation, and water quality degradation have led to the decline of the ovate clubshell mussel (NatureServe 2003).

Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species.

Conclusion. Implementing Alternative D would have no effect on the mussels or designated critical habitat in Uphapee Creek. Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species. No impairment of special status species would occur as a result of this alternative.

Impacts from Implementing Alternative E

Alternative E offers the most recreational opportunities of all the alternatives outside of the core historic and visitor areas. As with Alternatives B, C, and D proposed development changes to the Tuskegee Airmen NHS under this alternative would not occur in potential habitat for the mussel

species. However, stormwater runoff from the newly developed impervious surfaces proposed under this alternative has the potential to impact (i.e., sedimentation, turbidity) the water quality in Uphapee Creek potentially effecting the three mussel species. In addition, impacts to water quality would be expected during construction of the facilities; however, these impacts are not likely to adversely affect the three mussel species. To control stormwater runoff from the newly developed impervious areas and to protect water quality, standards from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*, Volumes 1 and 2 would be followed (Alabama SWCC 2003). These rules require that a Construction Best Management Practices Plan (CBMPP) that is designed to minimize pollutant discharges in stormwater runoff to the maximum extent practicable during land disturbance activities be fully implemented and effectively maintained.

The area zoned as Administration for this alternative could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs.

The potential restoration and interpretative programs planned for the expanded Historic 1945 Zone could result in additional loss or clearing of vegetation in the western portion of the site.

No new developments or changes to existing developments are proposed

for the Visitor Orientation Zone for Alternative E.

The Recreation Zone encompasses slightly more than ½ of the site, including most of the eastern half of the site. This zone would allow low impact recreation activities and interpretive programs. Visitor services and facilities in this zone could include up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and infrastructure in this zone that may be accommodated includes paved parking, VIP/host pads with hookups, single lane paved roads, and picnic areas. Some areas in the Recreation Zone would be maintained as open areas or with other recreational facilities.

Even though this alternative involves more development at the site than the other alternatives, there would be no effect on special status species or designated critical habitat in Uphapee Creek. As with the other alternatives, CBMPPs would be implemented to prevent impacts from potential stormwater runoff to the water quality of nearby streams.

Cumulative Impacts. Stormwater runoff, degraded water quality, and loss of habitat are some of the reasons aquatic species become threatened or endangered. In general, aquatic species are slowly becoming more impacted by human activity, causing individuals and populations to either adapt or decline in numbers. Increased stormwater runoff has occurred in the region as a result of commercial and

residential development, road construction, and agriculture. Incremental development of the region has affected the abundance and diversity of aquatic species by impacting the water quality of the rivers and streams. However, due to the limited development in the vicinity of the Tuskegee Airmen NHS, water quality impacts are not expected to be significant. Therefore, the combination of these actions may cause negligible adverse impacts on special status species in the vicinity of the park.

The three mussel species require unique habitats to thrive. The habitat of the finelined pocketbook mussel includes both high and low gradient creeks and medium-sized rivers of moderate gradient and riffle. The southern clubshell mussel needs highly oxygenated streams with sand and gravel substrate and the ovate clubshell mussel prefers habitat with moderate to high gradient large and medium-sized rivers or creeks with pools and riffles. The finelined pocketbook mussel currently appears to be restricted to creek habitat and may have been eliminated from most river habitat throughout its range (NatureServe 2003 and Smith 1993). Habitat modification, sedimentation, and water quality degradation have led to the decline of the ovate clubshell mussel (NatureServe 2003).

Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species.

Conclusion. Implementing Alternative E would have no effect the mussels or designated critical habitat in Uphapee Creek. Because this alternative would not contribute to the impacts of other past, present, and reasonably foreseeable future actions, there would be no project-related cumulative impacts on listed, candidate, or other special status species. No impairment of special status species would occur as a result of this alternative.

SOUNDSCAPES

Methodology

Context, time, and intensity together determine the level of impact of an activity. For example, noise for a certain period and intensity would be a greater impact in a highly sensitive context, and a given intensity would be a greater impact if it occurred more often, or for longer duration. In some cases an analysis of one or more factors may indicate one impact level, while an analysis of another factor may indicate a different impact level, according to the criteria below. In such cases, best professional judgment based on a documented rationale was used to determine which impact level best applies to the situation being evaluated.

Negligible – Natural sounds would prevail in zones where management objectives call for natural processes to predominate; human-caused noise would be absent or very infrequent and mostly unmeasurable.

Minor – Natural sounds would predominate in zones where management objectives call for natural processes to

predominate, with human-caused noise infrequent and at low levels. In zones where human-caused noise is consistent with the Tuskegee Airmen NHS purpose and objectives, natural sounds could be heard occasionally.

Moderate – In zones where management objectives call for natural processes to predominate, natural sounds would predominate, but human-caused noise could occasionally be present at low to moderate levels. In areas where human-caused noise is consistent with Tuskegee Airmen NHS purpose and objectives, it would predominate during daylight hours and would not be overly disruptive to visitor activities in the area; in such areas, natural sounds could still be heard occasionally.

Major – In zones where management objectives call for natural processes to predominate, natural sounds would be impacted by human-caused noise sources frequently or for extended periods of time. In zones where human-caused noise is consistent with Tuskegee Airmen NHS purpose and zoning,

- the natural soundscape would be impacted most of the day
- noise would disrupt conversation for long periods of time and/or make enjoyment of other activities in the area difficult
- natural sounds would rarely be heard during the day

Impacts from Implementing Alternative A – No Action

The level of human-related noise in all areas of the Tuskegee Airmen NHS would not change from existing levels as a result of implementing the no-action

alternative. Consequently no new impacts would be anticipated.

Cumulative Impacts. In general, natural soundscapes have been degraded from activities on lands adjacent to the Tuskegee Airmen NHS boundaries such as aircraft and activities at Moton Field Municipal Airport and traffic along General Chappie James Dr (Route 81). However, natural soundscapes dominate at most of the Tuskegee Airmen NHS because it is in a rural part of the county.

This alternative would not contribute to the impacts of other past, present and reasonably foreseeable future actions, so there would be no cumulative impacts on soundscapes resulting from implementing this alternative.

Conclusion. Alternative A would have no new effects on natural soundscapes. However, this alternative would contribute to long-term moderate beneficial impacts on natural soundscapes since 2/3 of the site would remain undeveloped. Because this alternative would not have any new effects on the natural soundscape, there would be no cumulative effects. Thus, there would be no impairment of this resource.

Impacts from Implementing Alternative B

Under Alternative B, the Administration Zone would impact the soundscapes of the site; however, this would be consistent with the designated use of this zone. There would be short-term moderate adverse impacts on soundscapes from the construction of the facilities (i.e., parking lots, offices, storage and maintenance buildings, and similar structures to support park

operational and administrative needs) in the Administration Zone.

The Nature Discovery Zone would consist of trails and wayside exhibits resulting in long-term adverse impacts to soundscapes, but these impacts would be negligible because human activities within this zone would be passive. In addition, there would be long-term moderate beneficial impacts on the soundscapes because the property would be protected from development by preserving 2/3 of the park as a nature zone.

No new impacts to soundscapes would be expected as a result of implementing the Historic 1945 Zone or the Visitor Orientation Zone for Alternative B, because no new developments or changes to existing developments are proposed under this alternative for these zones at the Tuskegee Airmen NHS. Impacts on soundscapes from existing development would continue.

Cumulative Impacts. In general natural soundscapes have been degraded from activities on lands adjacent to the Tuskegee Airmen NHS boundaries such as aircraft and activities at Moton Field Municipal Airport and traffic along General Chappie James Dr (Route 81). However, natural soundscapes dominate at most of the Tuskegee Airmen NHS because it is in a rural part of the county.

This alternative, in combination with the minor adverse impacts above, would result in negligible adverse cumulative impacts on the soundscapes.

Conclusion. Implementing Alternative B would have negligible long-term adverse impacts on soundscapes. In

addition, there would be long-term moderate beneficial impacts on the soundscapes because the property would be protected from development by preserving 2/3 of the site as a nature zone. The overall cumulative impacts would be negligible and adverse. There would be no impairment of this resource.

Impacts from Implementing Alternative C

Impacts to soundscapes for this alternative would be similar to Alternative B. The Administration Zone would impact the soundscapes of the site; however, this would be consistent with the designated use of this zone. There would be short-term moderate adverse impacts on soundscapes from the construction of the facilities (i.e., parking lots, offices, storage and maintenance buildings, and similar structures to support park operational and administrative needs) in the Administration Zone.

The Nature Discovery Zone would consist of trails and wayside exhibits resulting in long-term adverse impacts to soundscapes, but these impacts would be negligible because human activities within this zone would be passive. In addition, there would be long-term moderate beneficial impacts on the soundscapes because the property would be protected from development by preserving 1/2 of the park as a nature zone.

Impacts from the expanded Historic 1945 Zone in Alternative C on soundscapes could result from the potential restoration and interpretative programs planned for this zone. However, human activities in this zone would be

consistent with the designated use of this zone.

No new impacts to soundscapes would be expected as a result of implementing the Visitor Orientation Zone for Alternative C, because no new developments or changes to existing developments are proposed under this alternative for this zone at the Tuskegee Airmen NHS. Impacts on soundscapes from existing development in this zone would continue.

Cumulative Impacts. In general natural soundscapes have been degraded from activities on lands adjacent to the Tuskegee Airmen NHS boundaries such as aircraft and activities at Moton Field Municipal Airport and traffic along General Chappie James Dr (Route 81). However, natural soundscapes dominate at most of the Tuskegee Airmen NHS because it is in a rural part of the county.

This alternative, in combination with the minor adverse impacts above, would result in negligible and adverse cumulative impacts on soundscapes.

Conclusion. Implementing Alternative C would have negligible long-term adverse impacts on soundscapes. In addition, there would be long-term moderate beneficial impacts on the natural soundscapes because the property would be protected from development by preserving 1/2 of the site as a nature zone. The overall cumulative impacts would be negligible and adverse. There would be no impairment of this resource.

Impacts from Implementing Alternative D - Agency and

Environmentally Preferred Alternative

Impacts to soundscapes would be slightly more for this alternative due to the addition of a Recreation Zone in this alternative. The Recreation Zone would allow low impact recreational activities (i.e., hiking, walking, nature viewing, and picnicking) and interpretative programs. However, impacts to soundscapes in this zone along with the Administration Zone and the Historic 1945 Zone would be consistent with the designated use of these zones. There would be short-term moderate adverse impacts on soundscapes from the construction of the facilities and structures in these zones and long-term minor adverse impacts after implementation of the alternative.

The Nature Discovery Zone would consist of trails and wayside exhibits resulting in long-term adverse impacts to soundscapes, but these impacts would be negligible because human activities within this zone would be passive. In addition, there would be long-term moderate beneficial impacts on the soundscapes because the property would be protected from development by preserving 1/3 of the site as a nature zone.

No new impacts to soundscapes would be expected as a result of implementing the Visitor Orientation Zone for Alternative D, because no new developments or changes to existing developments are proposed under this alternative for this zone at the site. Impacts on soundscapes from existing development in this zone would continue.

Cumulative Impacts. In general natural soundscapes have been degraded from activities on lands adjacent to the Tuskegee Airmen NHS boundaries such as aircraft and activities at Moton Field Municipal Airport and traffic along General Chappie James Dr (Route 81). However, natural soundscapes dominate at most of the Tuskegee Airmen NHS because it is in a rural part of the county.

This alternative, in combination with the minor adverse impacts above, would result in minor and adverse cumulative impacts on the natural soundscapes.

Conclusion. Implementing Alternative D would have long-term minor adverse impacts on soundscapes. In addition, there would be long-term minor beneficial impacts on the natural soundscapes because the property would be protected from development by preserving 1/3 of the site as a nature zone. The overall cumulative impacts would be minor and adverse. There would be no impairment of this resource.

Impacts from Implementing Alternative E

Alternative E would result in changes in conditions affecting soundscapes. Alternative E offers the most recreational opportunities of all the alternatives outside of the core historic and visitor areas. This zone would allow low impact recreation activities and interpretive programs. Visitor services and facilities in this zone could include up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and

infrastructure in this zone that may be accommodated includes paved parking, VIP/host pads with hookups, single lane paved roads, and picnic areas. Due to the facilities offered under this alternative, there would be an increase in human-related noises resulting in short-term moderate adverse impacts on soundscapes from construction, and long-term moderate adverse impacts after construction is completed. However, impacts to soundscapes from this zone would be consistent with the designated use of this zone.

Impacts to the soundscapes in the Administration Zone and the Historic 1945 Zone would be consistent with the designated use of these zones. There would be short-term moderate adverse impacts on soundscapes from the construction of the facilities and structures in these zones and long-term minor adverse impacts after implementation of the alternative.

No new impacts to soundscapes would be expected as a result of implementing the Visitor Orientation Zone for Alternative E, because no new developments or changes to existing developments are proposed under this alternative for this zone at the Tuskegee Airmen NHS. Impacts on soundscapes from existing development would continue.

This alternative does not have a Nature Discovery Zone.

Cumulative Impacts. In general natural soundscapes have been degraded from activities on lands adjacent to the Tuskegee Airmen NHS boundaries such as aircraft and activities at Moton Field Municipal Airport and traffic along General Chappie James Dr

(Route 81). However, natural soundscapes dominate at most of the Tuskegee Airmen NHS because it is in a rural part of the county.

This alternative, in combination with the minor adverse impacts above, would result in minor and adverse cumulative impacts on the natural soundscapes.

Conclusion. Implementing Alternative D would have long-term moderate adverse impacts on soundscapes. The overall cumulative impacts would be minor and adverse. There would be no impairment of this resource.

SOCIOECONOMIC ENVIRONMENT

METHODOLOGY

The NPS applied logic, experience, professional expertise, and professional judgment to analyze the impacts on the social and economic environment resulting from each alternative. Economic data, historic visitor use data, expected future visitor use, and future developments of the Tuskegee Airmen NHS were all considered in identifying, discussing, and evaluating expected impacts.

Intensity of Impact. Assessments of potential socioeconomic impacts for the action alternatives were based on comparisons between the no-action alternative and each of the action alternatives. The following intensity definitions were used.

Negligible – Effects on socioeconomic conditions would be at or below the level of detection. There would be no noticeable change in any defined socioeconomic indicators.

Minor – Effects on socioeconomic conditions would be slight but detectable.

Moderate – Effects on socioeconomic conditions would be readily apparent and result in changes to socioeconomic conditions on a local scale.

Major – Effects on socioeconomic conditions would be readily apparent, resulting in demonstrable changes to socioeconomic conditions in the region.

IMPACTS FROM IMPLEMENTING ALTERNATIVE A – NO ACTION

The no-action alternative would have no impact on the regional economy. Impacts discussed under this alternative are assuming conditions after the historic core area is open to the public.

In the no-action alternative impacts to the regional economy would continue at the same level as that outlined in the Development Concept Plan. Current management practices, policies, and park programs would continue to be implemented with no major changes from current levels. Visitor facilities would be provided and maintained in accordance with the Development Concept Plan. The average length of stay in the region would not likely change. Visitors would continue to visit the Tuskegee Airmen NHS in the same manner and experience the same social conditions.

Cumulative Impacts. The social and economic situation in Macon County is affected by a combination of many factors, including an NPS presence. The livelihoods of service-related businesses in the region rely to some degree on the inflow of tourist dollars, especially restaurants and motels. Tourism is not the driving factor in the regional economy. Macon County's economy largely depends on the service industry as well as its government labor force, which includes Tuskegee University and the Veterans Administration Hospital.

Common to all alternatives would be the relatively large increase

in the number of visitors expected when the historic core area is open to the public. This would be a long-term, moderate economic benefit to the local and state economy. The increase in visitors to the park may bring additional consumer services not currently available including private development such as lodging, restaurants, and service areas. Staffing of the site would produce long-term changes in the local employment and educational opportunities in the county would be impacted.

This alternative would not contribute to other past, present, and future impacts on social or economic conditions because impacts to the regional economy would continue at the same level as that outlined in the Development Concept Plan. Thus this alternative would have no related cumulative effects.

Conclusion. The no-action alternative would have no new effect on the socioeconomic environment in the region. Because this alternative would have no new effects on the socioeconomic environment, there would be no cumulative impacts.

IMPACTS FROM IMPLEMENTING ALTERNATIVE B

This alternative would have a long-term minor beneficial impact on the regional economy. The Tuskegee Airmen NPS would hire additional employees to handle the need for maintenance personnel. Hiring two employees (in addition to the 20 employees planned for when the historic core area is open to the public) would benefit the local economy through an increased demand for housing, utilities, services, and goods.

This alternative would also provide short-term minor benefits to the local economy for the construction called for in this alternative (i.e., parking lots, offices, storage and maintenance buildings, and trails).

The number of visitors, average length of visit, and length of season could increase when the addition of the Nature Discovery Zone is implemented. This zone could have up to 4,000 ft of natural trails and 10 wayside exhibits. Businesses that rely on the tourist trade would receive a long-term minor benefit through direct and indirect spending.

Cumulative Impacts. The social and economic situation in Macon County is affected by a combination of many factors, including an NPS presence. The livelihoods of service-related businesses in the region rely to some degree on the inflow of tourist dollars, especially restaurants and motels. Tourism is not the driving factor in the regional economy. Macon County's economy largely depends on the service industry as well as its government labor force, which includes Tuskegee University and the Veterans Administration Hospital.

Common to all alternatives would be the relatively large increase in the number of visitors expected when the historic core area is open to the public. This would be a long-term, moderate economic benefit to the local and state economy. The increase in visitors to the park may bring additional consumer services not currently available including private development such as lodging, restaurants, and service areas.

Staffing of the site would produce long-term changes in the local employment and educational opportunities in the county would be impacted.

This alternative, in combination with the beneficial impacts above, would result in minor beneficial cumulative effects; however, this alternative's contribution to these effects would be small and beneficial.

Conclusion. Implementing Alternative B would result in long-term minor beneficial impacts on the socioeconomic environment. The overall cumulative effects would be minor and beneficial; this alternative's contribution to these effects would be small and beneficial.

IMPACTS FROM IMPLEMENTING ALTERNATIVE C

This alternative would have a long-term minor beneficial impact on the regional economy. The Tuskegee Airmen NPS would hire additional employees to handle the need for maintenance personnel. Hiring two employees (in addition to the 20 employees planned for when the historic core area is open to the public) would benefit the local economy through an increased demand for housing, utilities, services, and goods.

This alternative would also provide short-term minor benefits to the local economy for the construction called for in this alternative (i.e., parking lots, offices, storage and maintenance buildings, and trails).

The number of visitors, average length of visit, and length of season could increase when the addition of the Nature Discovery

Zone is implemented. This zone could have up to 3,500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. Businesses that rely on the tourist trade would receive a long-term minor benefit through direct and indirect spending.

Cumulative Impacts. The social and economic situation in Macon County is affected by a combination of many factors, including an NPS presence. The livelihoods of service-related businesses in the region rely to some degree on the inflow of tourist dollars, especially restaurants and motels. Tourism is not the driving factor in the regional economy. Macon County's economy largely depends on the service industry as well as its government labor force, which includes Tuskegee University and the Veterans Administration Hospital.

Common to all alternatives would be the relatively large increase in the number of visitors expected when the historic core area is open to the public. This would be a long-term, moderate economic benefit to the local and state economy. The increase in visitors to the park may bring additional consumer services not currently available including private development such as lodging, restaurants, and service areas. Staffing of the site would produce long-term changes in the local employment and educational opportunities in the county would be impacted.

This alternative, in combination with the beneficial impacts above, would result in minor beneficial cumulative effects; however, this alternative's contribution to

these effects would be small and beneficial.

Conclusion. Implementing Alternative C would result in long-term minor beneficial impacts on the socioeconomic environment. The overall cumulative effects would be minor and beneficial; this alternative's contribution to these effects would be small and beneficial.

**IMPACTS FROM IMPLEMENTING
ALTERNATIVE D - AGENCY AND
ENVIRONMENTALLY PREFERRED
ALTERNATIVE**

This alternative would have a long-term moderate beneficial impact on the regional economy. The Tuskegee Airmen NPS would hire additional employees to handle the need for interpretative and maintenance personnel. Hiring six employees (in addition to the 20 employees planned for when the historic core area is open to the public) would benefit the local economy through an increased demand for housing, utilities, services, and goods.

This alternative would also provide short-term minor benefits to the local economy for the construction called for in this alternative (i.e., parking lots, offices, storage and maintenance buildings, trails, picnic areas, and unpaved roads).

The number of visitors, average length of visit, and length of season could increase when the addition of the Nature Discovery Zone and Recreation Zone is implemented. These zones could have up to 5,000 ft of natural trails, 1,000 ft of hardened trails, 15 wayside exhibits, 3 kiosks, and a small group program

area that could accommodate up to 30 people. Additional facilities and infrastructure that could be accommodated in the Recreation Zone in this alternative are picnic areas, unpaved roads, and VIP/Host pads.

Businesses that rely on the tourist trade would receive a long-term moderate benefit through direct and indirect spending.

Cumulative Impacts. The social and economic situation in Macon County is affected by a combination of many factors, including an NPS presence. The livelihoods of service-related businesses in the region rely to some degree on the inflow of tourist dollars, especially restaurants and motels. Tourism is not the driving factor in the regional economy. Macon County's economy largely depends on the service industry as well as its government labor force, which includes Tuskegee University and the Veterans Administration Hospital.

Common to all alternatives would be the relatively large increase in the number of visitors expected when the historic core area is open to the public. This would be a long-term, moderate economic benefit to the local and state economy. The increase in visitors to the park may bring additional consumer services not currently available including private development such as lodging, restaurants, and service areas. Staffing of the site would produce long-term changes in the local employment and educational opportunities in the county would be impacted.

This alternative, in combination with the beneficial impacts above,

would result in moderate beneficial cumulative effects.

Conclusion. Implementing Alternative D would result in long-term moderate beneficial impacts on the socioeconomic environment. The overall cumulative effects would be moderate and beneficial.

IMPACTS FROM IMPLEMENTING ALTERNATIVE E

This alternative would have a long-term moderate beneficial impact on the regional economy. The Tuskegee Airmen NPS would hire additional employees to handle the need for interpretative and maintenance personnel. Hiring six employees (in addition to the 20 employees planned for when the historic core area is open to the public) would benefit the local economy through an increased demand for housing, utilities, services, and goods.

This alternative would also provide short-term minor benefits to the local economy for the construction called for in this alternative (i.e., parking lots, offices, storage and maintenance buildings, picnic areas, and unpaved roads).

The number of visitors, average length of visit, and length of season could increase when the addition of the Nature Discovery Zone and Recreation Zone is implemented. These zones could have up to 5000 ft of natural trails, 2000 ft of hardened trails, 30 additional wayside exhibits, 5 kiosks, and a group program area that could accommodate up to 60 people. Additional facilities and infrastructure in this zone that may be accommodated includes paved

parking, VIP/host pads with hookups, single lane paved roads, and picnic areas. Businesses that rely on the tourist trade would receive a long-term moderate benefit through direct and indirect spending.

Cumulative Impacts. The social and economic situation in Macon County is affected by a combination of many factors, including an NPS presence. The livelihoods of service-related businesses in the region rely to some degree on the inflow of tourist dollars, especially restaurants and motels. Tourism is not the driving factor in the regional economy. Macon County's economy largely depends on the service industry as well as its government labor force, which includes Tuskegee University and the Veterans Administration Hospital.

Common to all alternatives would be the relatively large increase in the number of visitors expected when the historic core area is open to the public. This would be a long-term, moderate economic benefit to the local and state economy. The increase in visitors to the park may bring additional consumer services not currently available including private development such as lodging, restaurants, and service areas. Staffing of the site would produce long-term changes in the local employment and educational opportunities in the county would be impacted.

This alternative, in combination with the beneficial impacts above, would result in moderate beneficial cumulative effects.

Conclusion. Implementing Alternative E would result in

long-term moderate beneficial impacts on the socioeconomic environment. The overall cumulative effects would be moderate and beneficial.

VISITOR USE AND EXPERIENCE

METHODOLOGY

The analysis of potential effects of the alternatives on visitor use and experience is based on how visitor use and experiences would change with the addition or removal of certain facilities and the way management prescriptions were applied in the alternatives. This analysis is primarily qualitative rather than quantitative due to the conceptual nature of the alternatives.

Duration of Impact. Short-term impacts would occur during one visit only; long-term impacts would occur during more than one visit.

Intensity of Impact. Impacts were evaluated comparatively between alternatives, using the no-action alternative as a baseline for comparison with each action alternative:

Negligible – Visitors would likely be unaware of any effects associated with implementation of the alternative.

Minor – Changes in visitor use and/or experience would be slight but detectable, would affect few visitors, and would not appreciably limit or enhance visitor experiences identified as fundamental to the national historic site's purpose and significance.

Moderate – Some characteristics of visitor use and/or experience would change, and many visitors would likely be aware of the effects associated with implementation of the alternative; some changes to experiences identified as fundamental to the national

historic site's purpose and significance would be apparent.

Major – Multiple characteristics of visitor experience would change, including experiences identified as fundamental to the national historic site's purpose and significance; most visitors would be aware of the effects associated with implementing the alternative.

Type of Impact. Adverse impacts are those that most visitors would perceive as undesirable. Beneficial impacts are those that most visitors would perceive as desirable.

IMPACTS FROM IMPLEMENTING ALTERNATIVE A – NO ACTION

In the no-action alternative visitor experience, visitor facilities, interpretation and education would continue at the same level as that outlined in the Development Concept Plan. Overall, existing formal and informal interpretation at the historic core area would continue to create a moderate beneficial impact on visitors to the site. However, there would be very low potential for interpretation and educational opportunities in addition to those provided in the historic core area. There would be little opportunity for recreational variety since there would be no additional trails, picnic areas, or designated areas for recreation under the no-action alternative. In addition there would be very low potential for visitor services and facilities in addition to those provided in the visitor areas. All these adverse conditions would result in

moderate long-term adverse impacts to visitor use and experience at the national historic site. However, there would be very high potential for ensuring visitor health and safety due to low visitor dispersion in the park and a more controlled (but limited) visitor experience.

Cumulative Impacts. Visitors to the Tuskegee Airmen NHS would experience the same level of educational opportunities through staff interaction and interpretive programs provided for in the Development Concept Plan. Visitors may continue to combine trips with visits to other historic sites in the area such as Tuskegee University. This alternative would not result in any new actions that would contribute to these effects and so would not have any cumulative effects.

Conclusion. Implementing the no-action alternative would result in long-term moderate adverse impacts to visitor use and experience. Because actions proposed in this alternative would have no new effects on visitor use and experience, there would be no project-related cumulative impacts.

IMPACTS FROM IMPLEMENTING ALTERNATIVE B

Alternative B emphasizes the natural environment of the Tuskegee Airmen NHS by keeping the park largely undeveloped and natural in character outside of the historic core and visitor areas. The Historic 1945 Zone, Nature Discovery Zone, Visitor Orientation Zone, and Administration Zones are components of Alternative B. The Administration Zone would not be

accessible to visitors and is not discussed further.

Alternative B would provide a moderate to high positive impact for interpretive and educational opportunities through the implementation of up 4000 ft of natural trails and 10 additional wayside exhibits outside of the historic core area. In addition, the Nature Zone in Alternative B would encompass the largest area (2/3 of the site) of any of the alternatives and could provide high potential for visitors to enjoy a quiet walk along nature trails. The undeveloped habitat and nature of the trails could be enjoyed by visitors in near solitude during periods of time when use is low. A picnic area would provide a location for visitors to rest and linger at the site. The addition of nature trails at Tuskegee Airmen NHS would provide a long-term moderate beneficial impact for visitor use and experience at the site.

The Visitor Orientation Zone would concentrate visitor use into a small area from which they could move to the Historic 1945 Zone and/or the Nature Zone. At times large numbers of visitors, or visiting school groups could result in minor, short-term adverse impacts to the visitor experience within the Visitor Orientation Zone. Use of facilities, optimum interpretive experience, and personal expectations of the visit could be affected by large numbers of people in a relatively small area.

This alternative would have a long-term, minor, beneficial effect on ensuring public health and employee safety due to the

low dispersion of visitors compared to the other action alternatives.

Cumulative Impacts. In 1990, a statewide survey of Alabama residents determined that approximately 87 percent of residents participate in some form of outdoor recreation. Walking for pleasure (29 percent) and trail hiking (5 percent) were two of the many activities enjoyed by Alabama residents (ADECA 2002). Regionally, in the South Central Alabama Planning District where Tuskegee Airmen NHS is located, 25 percent of the respondents walk for pleasure and 1.5 percent participates in trail hiking. In addition, demand for hiking/walking trails was determined to exceed the available sites for participation (ADECA 2002).

The visitor experience available through the options presented in Alternative B would provide an increased opportunity to educate visitors on the history of the Tuskegee Airmen and provide additional opportunities for experiencing nature and walking. As visitor use increases with increased opportunity for interpretation, educational and nature enjoyment, experiences of crowded facilities, interpretive programs, and loss of solitude on trails would occur. Visitors to other nearby historic sites such as Tuskegee University may increase as notoriety of the restoration and rehabilitation of Tuskegee Airmen NHS is acknowledged.

When impacts discussed above are considered in combination with the impacts of this alternative, the resulting cumulative effects on

the visitor experience would be long term, minor, and beneficial.

Conclusion. Alternative B would provide more visitor opportunities for learning the history of the Tuskegee Airmen and enjoying open space by using nature trails with a minimal investment in facilities and interpretive exhibits. Implementing Alternative B would result in moderate long-term beneficial impacts on the visitor experience. The overall cumulative impacts would be minor and beneficial.

IMPACTS FROM IMPLEMENTING ALTERNATIVE C

Alternative C also emphasizes the natural environment of the Tuskegee Airmen NHS. The Historic 1945 Zone, Nature Discovery Zone, Visitor Orientation Zone, and Administration Zones are components of Alternative C. The Historic 1945 Zone is expanded in this alternative to encompass the southeast and west of the core area and presents the visitor with additional opportunities to experience the life of the Tuskegee Airmen in its historic context. Additional restoration would provide the visitor with additional interpretive and educational opportunities and exhibits over a larger area and in most situations provide the visitor with opportunities to disperse from groups and crowds and move through the features and exhibits at their own pace. The Administration Zone would not be accessible to visitors and is not discussed further.

This alternative provides for increased opportunities for interaction with NPS staff and other interpreters which would provide the visitor with personal

contact and increased opportunities to interact with interpretive staff. Beneficial impacts would also be provided by the Nature Zone which would encompass half of the site where visitors would be provided with natural trails for walking and nature viewing on up to 3500 ft of natural trail and 300 ft of hardened trail. As in Alternative B, the need for locations where people can walk are in demand and providing walking trails in Alternative C would provide beneficial long-term impacts to visitors. The undeveloped habitat and nature of the trails could be enjoyed by visitors in near solitude during periods of time when use is low. A picnic area would provide a location for visitors to rest and linger at the site. The addition of nature trails at Tuskegee Airmen NHS would provide a long-term moderate beneficial impact for visitor use and experience at the site.

As with Alternative B, the Visitor Orientation Zone would concentrate visitor use into a small area from which they could move to the Historic 1945 Zone and/or the Nature Zone. High visitor use (i.e., large numbers of visitors, or visiting school groups) at times could result in minor, short-term adverse impacts from congestion in the Visitor Orientation Zone, and crowded interpretive and cultural resource exhibits, and facilities.

This alternative would have a long-term, minor, beneficial effect on ensuring public health and employee safety due to the low dispersion of visitors compared to the other action alternatives.

Cumulative Impacts. In 1990, a statewide survey of Alabama residents determined that approximately 87 percent of residents participate in some form of outdoor recreation. Walking for pleasure (29 percent) and trail hiking (5 percent) were two of the many activities enjoyed by Alabama residents (ADECA 2002). Regionally, in the South Central Alabama Planning District where Tuskegee Airmen NHS is located, 25 percent of the respondents walk for pleasure and 1.5 percent participates in trail hiking. In addition, demand for hiking/walking trails was determined to exceed the available sites for participation (ADECA 2002).

The visitor experience available through the options presented in Alternative C would provide an increased opportunity to educate visitors on the history of the Tuskegee Airmen and provide additional opportunities for experiencing nature and walking. As visitor use increases with increased opportunity for interpretation, educational and nature enjoyment, experiences of crowded facilities, interpretive programs, and loss of solitude on trails would occur. Visitors to other nearby historic sites such as Tuskegee University may increase as notoriety of the restoration and rehabilitation of Tuskegee Airmen NHS is acknowledged.

When impacts discussed above are considered in combination with the impacts of this alternative, the resulting cumulative effects on the visitor experience would be long term, minor, and beneficial.

Conclusion. Alternative C would provide more visitor opportunities

for learning the history of the Tuskegee Airmen and enjoying open space by using nature trails with a minimal investment in facilities and interpretive exhibits. Implementing Alternative C would result in moderate long-term beneficial impacts on the visitor experience. The overall cumulative impacts would be minor and beneficial.

**IMPACTS FROM IMPLEMENTING
ALTERNATIVE D - AGENCY AND
ENVIRONMENTALLY PREFERRED
ALTERNATIVE**

This alternative aims to provide the most diversity of visitor interpretive programs and recreational opportunities. The Historic 1945 Zone, Nature Discovery Zone, Visitor Orientation Zone, Recreation Zone, and Administration Zones are components of Alternative D. The Administration Zone would not be accessible to visitors and is not discussed further.

Added to Alternative D is the Recreation Zone which supports additional opportunities for visitors to the site. Visitor services and facilities that could be added in the selection of Alternative D include the addition of up to 5000 ft of walking trails, 1000 ft of hardened trails, 15 wayside exhibits, 3 kiosks, and a small area where group programs (to 30 people) could be provided. These features would all provide enhanced opportunities for interpretation and education, staff contact with visitors, and the enjoyment of open space and nature resulting in beneficial long-term impacts. In addition, the establishment of an area for group use would provide a location for focusing school

groups and special use groups to optimize staff contact and interpretation of larger groups. Bus parking would further facilitate the enhancement of visitor use by groups. The Recreation Zone would additionally provide for the addition of low impact recreational activities and interpretive programming that would allow a focus different from the site's predominant story of the Tuskegee Airmen. An open space area for low impact recreation could be located in the southeastern portion of the site and be no larger than one acre. The Recreation Zone would provide the potential for visitors to diversify their use of the Tuskegee Airmen NHS and would add further opportunity for increasing visitation. The addition of a Recreation Zone at Tuskegee Airmen NHS would provide a long-term major beneficial impact for visitor use and experience.

Visitor experience within the expanded Historic 1945 Zone in Alternative D would result in beneficial impacts through enhanced restoration and increased interpretive programs and opportunities similar to those afforded in Alternative C. High visitor use at times could result in short-term minor adverse impacts from congestion in the Visitor Orientation Zone, crowded interpretive and cultural resource exhibits, and facilities.

The addition of a Recreation Zone would result in long-term moderate adverse effects on the ability of the Park to ensure public health and safety as visitor's become more dispersed from the Visitor Orientation Zone and the historic core area.

Cumulative Impacts. In 1990, a statewide survey of Alabama residents determined that approximately 87 percent of residents participate in some form of outdoor recreation. Walking for pleasure (29 percent) and trail hiking (5 percent) were two of the many activities enjoyed by Alabama residents (ADECA 2002). Regionally, in the South Central Alabama Planning District where Tuskegee Airmen NHS is located, 25 percent of the respondents walk for pleasure and 1.5 percent participates in trail hiking. In addition, demand for hiking/walking trails was determined to exceed the available sites for participation (ADECA 2002).

The visitor experience available through the options presented in Alternative D would provide an increased opportunity to educate visitors on the history of the Tuskegee Airmen NHS and provide additional opportunities for experiencing nature and walking. In addition, recreational activities would be offered under this alternative. Low impact recreational activities would provide the potential for visitors to diversify their use of the Tuskegee Airmen NHS and would add further opportunity for increasing visitation. As visitor use increases with increased opportunity for interpretation, educational and nature enjoyment, experiences of crowded facilities, interpretive programs, and loss of solitude on trails would occur. Visitors to other nearby historic sites such as Tuskegee University may increase as the opportunities for increased visitor experience including low-impact recreation and additional opportunities for education and interpretive

interactions at Tuskegee Airmen NHS is acknowledged.

When impacts discussed above are considered in combination with the impacts of this alternative, the resulting cumulative effects on the visitor experience would be long term, moderate, and beneficial.

Conclusion. Alternative D presents the most diverse range of options for visitor experience. Implementing Alternative D would result in major long-term beneficial impacts on the visitor experience. The overall cumulative impacts would be moderate and beneficial.

IMPACTS FROM IMPLEMENTING ALTERNATIVE E

Alternative E offers the most recreational opportunities of all the alternatives outside of the historic core and visitor areas. The Historic 1945 Zone, Visitor Orientation Zone, Recreation Zone, and Administration Zone are components of Alternative E. The Administration Zone would not be accessible to visitors and is not discussed further.

Alternative E provides enhancements to the visitor experience through the enlargement of the Recreation Zone, including more numerous picnic areas, additional parking, and a larger area for low-impact recreation (up to 4 acres) and an option for a tram. All of these enhancements would provide beneficial recreational experiences for the visitor. Visitor services increase with the addition of 30 wayside exhibits, 200 ft of hardened trails, 5 kiosks and a larger group program area that would accommodate up to 60 people.

The increased development that would be incorporated by the substantial addition to recreational opportunities for this alternative would be an adverse impact to the visitor experience due to the elimination of the Nature Discovery Zone, which offered opportunity for solitude and nature viewing by keeping that portion of the park mostly undeveloped. The proposed enhancements would provide moderate long-term beneficial experiences through continued interpretation and educational programs - particularly for large groups. It also provides ample opportunities for recreation beyond the historic core area and visitor orientation area which would provide moderate long-term beneficial impacts to visitors using the Tuskegee Airmen NHS for those purposes. Increased congestion and loss of opportunities for solitude and nature viewing however, would result in minor adverse long-term impacts to visitors using those opportunities and potentially create conflict among user-groups and compromising the quality of the visitor experience.

The addition of a Recreation Zone would also act to further disperse visitors and increase visitation specifically for use of the low-impact recreation areas resulting in long-term moderate adverse affects on public health and safety.

Cumulative Impacts. In 1990, a statewide survey of Alabama residents determined that approximately 87 percent of residents participate in some form of outdoor recreation. Walking for pleasure (29 percent) and trail hiking (5 percent) were two of the many activities enjoyed by

Alabama residents (ADECA 2002). Regionally, in the South Central Alabama Planning District where Tuskegee Airmen NHS is located, 25 percent of the respondents walk for pleasure and 1.5 percent participates in trail hiking. In addition, demand for hiking/walking trails was determined to exceed the available sites for participation (ADECA 2002).

Additional recreational activities would be offered under this alternative. Low impact recreational activities would provide the potential for visitors to diversify their use of the Tuskegee Airmen NHS and would add further opportunity for increasing visitation. As visitor use increases with increased opportunity for interpretation, educational and nature enjoyment, experiences of crowded facilities, interpretive programs, and loss of solitude on trails would occur. Visitation by local residents as well as traveling visitors may substantially increase as the recreational opportunities at Tuskegee Airmen NHS are acknowledged and local demand is not met by other venues.

When impacts discussed above are considered in combination with the impacts of this alternative, the resulting cumulative effects on the visitor experience would be long term minor and beneficial as well as long-term minor and adverse.

Conclusion. Alternative E provides the largest menu of available activities and experience options for the visitor. Even though the expanded Recreation Zone would provide long-term moderate beneficial recreational experiences for the

visitor, the exclusion of a Nature Discovery Zone would result in long-term minor adverse impacts on the visitor experience. The overall cumulative impacts would be moderate and beneficial as well as minor and adverse.

NPS OPERATIONS

METHODOLOGY

The impact analysis evaluated the effects of the alternatives on the following aspects of NPS operations: staffing, infrastructure, visitor facilities, and services. The analysis was conducted in terms of how NPS operations and facilities might vary under the different management alternatives. The analysis is more qualitative rather than quantitative because of the conceptual nature of the alternatives. Consequently professional judgment was used to reach reasonable conclusions as to the intensity, duration, and type of potential impact.

Duration of Impact. Short-term impacts would be less than one year. Long-term impacts would extend beyond one year and have a permanent effect on operations.

Intensity of Impact.

Negligible – The effects would be at or below the lower levels of detection, and would not have an appreciable effect on national historic site operations.

Minor – The effects would be detectable, but would be of a magnitude that would not have an appreciable effect on national historic site operations.

Moderate – The effects would be readily apparent and would result in a substantial change in NPS operations in a manner noticeable to staff and the public.

Major – The effects would be readily apparent and would result in a substantial change in NPS operations in a manner noticeable to staff and the

public and be markedly different from existing operations.

Type of Impact. Beneficial impacts would improve NPS operations and/or facilities. Adverse impacts would negatively affect NPS operations and/or facilities and could hinder the staff's ability to provide adequate services and facilities to visitors and staff. Some impacts could be beneficial for some operations or facilities and adverse or neutral for others.

IMPACTS FROM IMPLEMENTING ALTERNATIVE A – NO ACTION

Under the no-action alternative, current management practices, policies, and park programs—such as maintenance, resource management, and park operations—would continue to be implemented with no major changes from that outlined in the Development Concept Plan. Zoning would not be applied. The historic core area would continue to be managed on a day-to-day basis without the guidance of a long-range plan. Approximately 2/3 of the park would be mostly undeveloped and not actively managed. However, there would be the potential for high operational efficiency due to the concentration of visitors and facilities in a small area.

Without a current general management plan in place, obtaining funding for future projects may be difficult, causing long-term minor to moderate adverse impacts on NPS operations.

Cumulative Impacts. In general regardless of the alternative, the NPS is in the process of increasing its workload at the park resulting from the restoration and rehabilitation of the historic core area. Consequently, buildings and grounds maintenance needs will increase causing long-term minor adverse impacts. Interpretation and administration needs will also increase at the park; however, additional NPS staff to fill these needs will be met. Once the historic core area is open to the public, the number of full time NPS staff is expected to triple.

Since the no-action alternative would have no new impacts on NPS operations because current management practices and park operations would continue to be implemented with no major changes from that outlined in the Development Concept Plan, there would be no cumulative effects.

Conclusion. The no-action alternative would result in no new impacts on NPS operations at the Tuskegee Airmen NHS. Because there would be no new impacts on NPS operations, there would be no cumulative impacts.

IMPACTS FROM IMPLEMENTING ALTERNATIVE B

Implementing this alternative would cause changes to NPS operations at Tuskegee Airmen NHS. Alternative B would result in implementation of an Administration Zone and Nature Discovery Zone. Additional NPS staff would be needed to maintain these zones. The Nature Discovery Zone could include development of up to 4,000 ft of natural trails and 10 wayside

exhibits. This zone would result in long-term, negligible, effects on NPS operations due to the limited amount of trails and exhibits to manage. The Administration Zone could include facilities such as parking lots, sidewalks, offices, storage buildings, maintenance, curatorial, emergency, and similar structures to support park operational and administrative needs. This alternative would have a long-term, minor, beneficial effect on ensuring public health and employee safety due to the low dispersion of visitors compared to the other action alternatives.

No new impacts to NPS operations would be expected as a result of implementing the Historic 1945 Zone or the Visitor Orientation Zone for Alternative B, because no new developments or changes to existing developments are proposed under this alternative for these zones at Tuskegee Airmen NHS. Impacts on NPS operations from existing development would continue.

Cumulative Impacts. In general regardless of the alternative, the NPS is in the process of increasing its workload at the park resulting from the restoration and rehabilitation of the historic core area. Consequently, buildings and grounds maintenance needs will increase causing long-term minor adverse impacts. Interpretation and administration needs will also increase at the park; however, additional NPS staff to fill these needs will be met. Once the historic core area is open to the public, the number of full time NPS staff is expected to triple.

When the impacts of Alternative B are added to the effects of other past, present, and future actions relative to NPS operations, no cumulative effects are expected

Conclusion. Implementing Alternative B would result in negligible long-term impacts on NPS operations at the Tuskegee Airmen NHS. There would be no overall cumulative effects.

IMPACTS FROM IMPLEMENTING ALTERNATIVE C

This alternative would have impacts to NPS operations similar to Alternative B. This alternative also includes an Administrative Zone and Nature Discovery Zone. This alternative could include up to 3500 ft of natural trails, 300 ft of hardened trails, and 10 additional wayside exhibits. The Historic 1945 Zone is larger for this zone allowing for the broadest restoration and interpretative programs related to the Tuskegee Airmen story. As with Alternative B, additional NPS staff would be needed to maintain these zones. However, the effects of maintaining the Nature Discovery Zone and the Historic 1945 Zone would result in long-term, negligible, effects on NPS operations due to the limited amount of additional trails and exhibits to manage. This alternative would have a long-term, minor, beneficial effect on ensuring public health and employee safety due to the low dispersion of visitors compared to the other action alternatives.

No new impacts to NPS operations would be expected as a result of implementing the Visitor Orientation Zone for Alternative C, because no new developments or changes to existing developments

are proposed under this alternative for these zones at Tuskegee Airmen NHS. Impacts on NPS operations from existing development would continue.

Cumulative Impacts. In general regardless of the alternative, the NPS is in the process of increasing its workload at the park resulting from the restoration and rehabilitation of the historic core area. Consequently, buildings and grounds maintenance needs will increase causing long-term minor adverse impacts. Interpretation and administration needs will also increase at the park; however, additional NPS staff to fill these needs will be met. Once the historic core area is open to the public, the number of full time NPS staff is expected to triple.

When the impacts of Alternative C are added to the effects of other past, present, and future actions relative to NPS operations, no cumulative effects are expected

Conclusion. Implementing Alternative C would result in long-term minor impacts on NPS operations at the Tuskegee Airmen NHS. There would be no overall cumulative effects.

IMPACTS FROM IMPLEMENTING ALTERNATIVE D - AGENCY AND ENVIRONMENTALLY PREFERRED ALTERNATIVE

This alternative differs from Alternatives B and C in that it offers a Recreation Zone. The Recreation Zone would allow low impact recreational activities and interpretative programs including hiking, walking, nature viewing, picnicking, and similar outdoor recreation endeavors. Like the

other alternatives it includes an Administrative Zone, Nature Discovery Zone, and Historic 1945 Zone. Due to the addition of the Recreation Zone in this alternative, additional staff would be needed for operation and maintenance of this zone. Grounds maintenance needs would cause long-term minor adverse impacts. Additional NPS interpretative staff would also be needed for this alternative to fulfill the need for telling the Tuskegee Airmen story. The addition of a Recreation Zone would have a long-term, moderate, adverse effect on ensuring public health and employee safety due to the high dispersion of visitors compared to the other action alternatives.

No new impacts to NPS operations would be expected as a result of implementing the Visitor Orientation Zone for Alternative D, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on NPS operations from existing development would continue.

Cumulative Impacts. In general regardless of the alternative, the NPS is in the process of increasing its workload at the park resulting from the restoration and rehabilitation of the historic core area. Consequently, buildings and grounds maintenance needs will increase causing long-term minor adverse impacts. Interpretation and administration needs will also increase at the park; however, additional NPS staff to fill these needs will be met. Once the historic core area is open to the public, the number of full time NPS staff is expected to triple.

When the impacts of Alternative D are added to the effects of other past, present, and future actions relative to NPS operations, no cumulative effects are expected

Conclusion. Implementing Alternative D would result in long-term minor impacts on NPS operations at the Tuskegee Airmen NHS. There would be no overall cumulative effects.

IMPACTS FROM IMPLEMENTING ALTERNATIVE E

Alternative E would result in changes in conditions affecting NPS Operations. This alternative offers a Recreation Zone, Administrative Zone, Nature Discovery Zone, and Historic 1945 Zone. As with Alternative D, due to the addition of the Recreation Zone in this alternative, additional staff would be needed for operation and maintenance of this zone. Grounds maintenance needs would cause long-term minor adverse impacts. Additional NPS interpretative staff would also be needed for this alternative; however, additional staff will be hired to meet this demand. The addition of a Recreation Zone would have a long-term, moderate, adverse effect on ensuring public health and employee safety due to the high dispersion of visitors compared to the other action alternatives.

No new impacts to NPS operations would be expected as a result of implementing the Visitor Orientation Zone for Alternative E, because no new developments or changes to existing developments are proposed under this alternative for this zone at Tuskegee Airmen NHS. Impacts on NPS operations from existing development would continue.

Cumulative Impacts. In general regardless of the alternative, the NPS is in the process of increasing its workload at the park resulting from the restoration and rehabilitation of the historic core area. Consequently, buildings and grounds maintenance needs will increase causing long-term minor adverse impacts. Interpretation and administration needs will also increase at the park; however, additional staff will be hired to meet this demand. Once the historic core area is open to the public, the number of full time NPS staff is expected to triple.

When the impacts of Alternative E are added to the effects of other past, present, and future actions relative to NPS operations, no cumulative effects are expected

Conclusion. Implementing Alternative E would result in long-term minor impacts on NPS operations at the Tuskegee Airmen NHS. There would be no overall cumulative effects.

OTHER IMPACTS

UNAVOIDABLE MODERATE OR MAJOR ADVERSE IMPACTS

Under Alternatives B, C, D, and E there would be new development as structures and roads constructed at the Tuskegee Airmen NHS. However, this would result in no unavoidable moderate or major adverse impacts on resources or visitor enjoyment.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Alternative A - There would be no irreversible or irretrievable commitment of resources under this Alternative.

Alternative B - Implementing this alternative would result in the irretrievable loss of some vegetation and soil productivity due to construction of facilities (i.e., walkways, buildings, and other permanent administration infrastructure) in the Administration Zone. Approximately 2/3 of the site would be preserved as a Nature Discovery Zone which would not have an irreversible or irretrievable commitment of resources.

Alternative C - Implementing this alternative would result in the irretrievable loss of some vegetation and soil productivity due to construction of facilities (i.e., walkways, buildings, and other permanent administration infrastructure) in the Administration Zone. In addition the Historic 1945 Zone may have additional development that may include vegetation removal and soil disturbance. Approximately 1/2 of the site would be preserved

as a Nature Discovery Zone which would not have an irreversible or irretrievable commitment of resources.

Alternative D, Agency and Environmentally Preferred -

Implementing this alternative would result in the irretrievable loss of some vegetation and soil productivity due to construction of facilities (i.e., walkways, buildings, and other permanent administration infrastructure) in the Administration Zone. The Administration Zone is slightly larger in this alternative and is divided into two separate areas and may constitute a slightly larger irretrievable commitment of resources. The Historic 1945 Zone may have additional development that may include vegetation removal and soil disturbance. There would also be some development of infrastructure in the Recreation Zone, which may also result in a minor irretrievable commitment of resources for the possible construction of unpaved parking and single lane roads. Approximately 1/3 of the site would be preserved as a Nature Discovery Zone which would not have an irreversible or irretrievable commitment of resources.

Alternative E - Implementing this alternative would result in the irretrievable loss of some vegetation and soil productivity due to construction of facilities (i.e., walkways, buildings, and other permanent administration infrastructure) in the Administration Zone. The Historic 1945 Zone may have additional development that may

include vegetation removal and soil disturbance. The Recreation Zone would cover approximately ½ of the site and may result in an irretrievable commitment of resources from the development of paved parking and roads and picnic and other visitor facilities. None of the site would be preserved as a Nature Discovery Zone.

RELATIONSHIPS BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The purpose of Tuskegee Airmen NHS is to preserve and restore the site where African Americans first received flight related military training. The preservation of this historic site will be concentrated in the Historic 1945 Zone, while other areas of the site would be preserved in a Nature Discovery Zone (Alternatives B, C, and D) or maintained for passive recreation in a Recreation Zone (Alternatives D and E). The Tuskegee Airmen NPS would manage these areas to maintain natural ecological processes and native biological communities, while promoting and supporting the cultural resources and visitor experience in the Historic 1945 Zone and Visitor Orientation Zone. Any actions NPS staff would take would be intended to ensure that human uses do not adversely affect the cultural resources or productivity of existing natural biotic communities.

Alternative A would not result in any new development and would have a low potential for reducing long-term natural productivity. Alternatives B, C, and D contain differing amounts of a Nature

Discovery Zone which would preserve long-term natural productivity. Under Alternative D, there would be a slight increase in the development in a Recreation Zone and there may be a minor loss of long-term productivity footprint as unpaved parking and roads are constructed. Alternative E does not contain a Nature Discovery Zone and may have a minor long-term loss of productivity associated with the construction of facilities within the Recreation Zone. Within the Recreation Zone in Alternatives D and E, the amount of development may be low or high depending on the needs to be met for visitors.

